THE
NEW ENGLAND FARMER

DEVOTED TO AGRICULTURE, HORTICULTURE, AND KINDRED ARTS.

NEW SERIES. Boston, August, 1869. VOL. III.---NO. 8.

R. P. EATON & CO., PUBLISHERS, OFFICE, 34 MERCHANTS' ROW. MONTHLY. SIMON BROWN, S. FLETCHER, } EDITORS.

HINTS FOR AUGUST.

ALL the grain is harvested; the hay crop is secured, except perhaps a little low ground hay, which is being got in as rapidly as possible, and the hoeing of the corn and potatoes is completed. What shall we occupy ourselves about during the month of August?

The meadow hay has to be cut mostly with a scythe, as the ground is too soft for the horse and mowing machine. Many of our meadows may be fitted for the mowing machine, and indeed the work of preparation is already begun. The high price of labor, and the facility which the use of the machine offers for the rapid gathering of meadow hay, are leading enterprising farmers to render their meadow soils firm enough for the machine by ditching and by surface dressing with sand or gravel. By these means they not only prepare it for the machine, but greatly improve the quality of the hay.

Now is the very time to attend to this matter of ditching. As soon as the hay is taken off, have a proper survey made, so that the ditches may be led in the proper direction, and made of suitable depth, and go right about it. As the muck from the ditches is wanted for the barn yard and cellar, two birds may thus be killed with one stone. The price paid for labor, and the difficulty in obtaining laborers at any price, must surely impress us all with the importance and economy of fitting every acre possible for the mowing machine. Let past experience induce us to make a beginning, and prepare a few acres for next season. Let the ditches be of suitable depth, and run in parallel lines; then the machine will make clean work between them. A wise economy will lead those whose meadow lands are capable of this improvement to give attention to this subject.

The turnips and beets will now require careful attention. The cultivator should be put through the rows as often as once a week. They must be carefully thinned and weeded. Clean culture is absolutely necessary to success. We think that ashes and superphosphate are the best manures for these crops, because they do not contain the seeds of weeds. A field that is well manured with barn manure, and well cultivated with corn or potatoes, is in a good state for turnips or beets, with only a dressing of superphosphate and ashes, or superphosphate, plaster and salt. Pure ground bone is probably the best dressing for turnips,

if it is properly prepared. This should be done by mixing it with moist loam or good garden soil, and shoveling it over once a week, for a month before it is used. Do not allow the plants to stand too thick in the rows. We are apt to err in this respect.

The garden will still require attention. Do not allow weeds to run to seed. They will make you pay for it next year. Trim the squash vines that are growing too rampant. Put a shingle or piece of board under the squashes or melons, especially if the ground is moist. It will often save them from rotting. Look after the trees that were trimmed last winter, or budded last year, and cut off the shoots that have been thrown out.

Look sharply around the young apple trees and peach trees for the borers. They are now in the bark, and may be easily reached with the point of a knife.

The early potatoes are now getting ready for market. The price often depends very much upon the manner of preparing them for the market. Wash them thoroughly and dry them, and put into the boxes or barrels only those of suitable size. A few small potatoes put in to fill up will often spoil the sale of a whole package.

Labor and care expended in preparing all articles for market are well repaid. Some men get from ten to twenty per cent. more for their vegetables, fruit and butter than others do, merely because they are put up in better shape. This is especially true with regard to small fruits and early vegetables, which are perishable in their nature, and subject to rapid decay. It always pays to have nice clean boxes and barrels, free from dust and all bad smells. There is quite an art in packing for the market, and it can only be acquired by pains-taking and observation. No expense is better incurred than that which is put into the best means of packing articles for the market. The manufacturers of fancy goods understand this matter. The boxes and their ornaments often cost more than the articles they contain; but people readily pay the difference between an article neatly and tastefully put up, and one put up in a cheaper style. We recollect that many years ago a produce dealer in South Market Street, a native of New Hampshire, issued a circular to the people of his native State, in which he estimated that the farmers of that State lost at least fifty thousand dollars annually by not packing their butter properly for market. Many of the people in our cities regard the quality and style of an article much more than the price, and those who consult their tastes and wishes will always secure the best class of customers.

August is the time for reseeding grass land. The earlier in the month the sod is turned over, the better. Let it lie a couple of weeks, and then top dress with compost, and sow the seed, and apply the harrow vigorously, and follow with the roller, and you will be sure of a good catch, if the seed is good. We think the last week in August or the first week in September is the best time to sow the seed. It will then get well rooted before the frost comes, and will be less liable to be winter killed than if sowed later. We are satisfied that since the adoption of this style of seeding grass lands, and at this season, our hay crop has much increased.

Now is the time to put in a patch of winter wheat. A piece of land from which the early potatoes have been taken should be ploughed and levelled with the harrow. Then top dress with fine compost and sow the wheat, and put it in with the cultivator and roller. The last week in this month is as good a time as any. Thus a good stand will be secured for winter. Winter wheat often fails from being sowed too late, and not being put in sufficiently deep. Wheat should be *planted*, not sowed. When we learn to put it in with the drill or the plough, our crop will be more sure and the grain of a better quality.

Thus, much of the work of August has reference to next year. So it always is with respect to the present. We are reaping the fruit of the past, or sowing for a future harvest. Then let us not forget the responsibility which attaches to the present time. It is the only time we can call our own.

Efficacy of Onions.—A writer says:—"We are troubled often with severe coughs, the result of colds of long standing, which may turn to consumption or premature death. Hard coughs cause sleepless nights by constant irritation of the throat, and a strong effort to throw off offensive matter from the lungs. The remedy proposed has often been tried, and is simply to take into the stomach before retiring for the night a piece of raw

onion after chewing. This esculent in an uncooked state is very healing, and collects the water from the lungs and throat, causing immediate relief to the patient."

For the New England Farmer.

THE GARDEN IN AUGUST.

The planting and heavy work in the garden is mainly done for this season, and but little now remains except to keep the crops thriving and free of weeds; to clear off crops to be succeeded by late ones; to save seeds as they ripen, and make provision for future fertilizers. If our previous remarks on the importance of a good garden have induced farmers, or others who have suitable land, to give a little extra care and labor to planting and cultivating a variety of vegetables, we hope that the result has justified all that we have said, both as to the profitableness and pleasure of a supply from ones own garden and from ones own labor. Still, as the "dear bought and far fetched" are too often overvalued, so there is danger that what we raise ourselves, or that which springs up almost spontaneously about us, will be undervalued. To appreciate the crisp freshness of vegetables taken from the garden, bedecked with the crystal drops of morning dew, one needs to partake of those that have been wilted, shrivelled, and heated by long transportation and exposure, thus losing not only their natural sweetness, but becoming actually unhealthy.

Asparagus.—Any weeds that the dense growth of tops have not kept down should be pulled out. If seed is desired, it is advisable to gather it as soon as it gets ripe, and sow at once—which is nature's way—or preserve to sow in spring.

Beans.—Dwarfs will be yielding freely now, and the poles will give us shelled beans, if proper care has been given them. Save some of the earliest and best to go to seed. If you have a surplus of string beans, they can be put up for the winter, by some of the approved modes of saving, or they can be allowed to ripen, and be saved as shelled and dried field beans, which they will equal in many respects.

Beets.—Thin the late planted, and use those pulled out for greens. Early and middle planted will answer for pulling to cook; pull first from those that stand nearest together, although the single ones may be the largest. A rapid, quick growth produces the best and most tender beets. It will pay to water small beds with liquid manure.

Cabbage and Cauliflowers.—Early planted will now be ready to use—selecting those most mature. It is not too late to set out plants for winter use, as the cabbage heads more rapidly after the cool fall weather than when it is hot and dry. Encourage them to a rapid growth, by frequent hoeing and applications of liquid manure.

Celery.—If the early planted has grown sufficiently, commence to earth it up. Late crops may be transplanted, if done early in the month. In transplanting, shorten the roots and remove straggling leaves; shade with evergreen boughs, or by other means, if the weather be bright and warm.

Corn.—The last planted will need frequent hoeing, and if stimulated with weak guano water, it will hasten the growth of that which is a little backward. The early planted will now be yielding good boiling ears. Some of the earliest and best ears should be saved to ripen for seed.

Cucumbers.—Gather for pickles and use when they attain a size to suit the fancy. Keep them closely picked, if you desire the greatest yield. A sufficient number of hills should be left to grow the seed needed; selecting the most perfect specimens nearest the roots. Others should be removed from the vines.

Manure.—No thoughtful gardener will neglect to provide for the future, by preparing and composting all vegetable and animal waste, as well as adding the slops and wash from the house. The vegetable matter from the garden and grounds, if properly composted with such articles as are allowed to waste their fragrance in the air from and about the house, will go far towards keeping a garden in a high state of fertility.

Melons.—If much fruit is set, it should be thinned to only a few specimens to each vine. Ripening may be accelerated by placing a thin flat stone or shingle under each specimen; an occasional careful turning will tend to more evenness in ripening, but this must be *carefully* done.

Seeds.—Use all care in saving the earliest, most healthy and best formed specimens from the healthiest plants, for maturing seed; and when ripe, properly save and care for the same. Never trust to memory, but always correctly label each package as laid away. Every experienced gardener knows the value of *good* seeds, that will *grow* when properly planted, and the vexation and loss from seed of a poor or inferior quality, and he is sure of getting the best in no other way than by growing and properly saving it himself. The best and most conscientious seed dealers sometimes fail to furnish good seed, as I have reason to know by late experience. Desiring a little Broom Corn seed, of a variety not at hand last spring, I obtained a small package from one of the most reliable seedsmen; but from the package only about a dozen seeds germinated or came up. I do not mention this to discredit any seedsman, but to show the importance of growing our own seed as far as possible, and of testing its germinating capacity before planting.

W. H. White.

South Windsor, Conn., 1869.

BLACK SPANISH FOWLS.

Of this beautiful breed of fowls, Mr. Bement gives the following description. The thorough-bred Spanish fowl should be entirely black, as far as feathers are concerned, and when in high condition display a greenish metallic lustre. An erect, brilliant, scarlet comb, serrated; with a clear milk-white face and ear-lobes; dark-blue legs; and a lofty carriage. Wattles of the hen small, but large and very conspicuous in the cocks, and, like the comb, of a light scarlet. This marked contrast of black, bright-red, and white, makes

the head of the Spanish cock as handsome as that of any other variety; and in the genuine breed the whole form is equally good. The cock-bird should be strong and short in the legs as possible; his back from tail to neck short, tail large and ample. He should weigh not less than six pounds; the head is rather large, the spurs long and sharp, and the bearing and carriage proud and high.

Spanish hens are also of good size and good figure, and are celebrated as good layers, producing very large white eggs. The head of the hen should be neat, and of moderate size; eyes bright; comb single, very large and pendulous; face entirely white, the white extending round the eye; neck of moderate length, neatly set on; body broad, wings of middle size; legs a bluish white; tail long and well squared; plumage of a glossy black, with brilliant tints of green and purple, as in the cock, but less brilliant. Her weight should not be less than five pounds.

Mr. Browne says it is doubtful whether they would readily become acclimated in the northern part of the United States, on account of severe frosts, which would be likely to injure their combs. Mr. Wright, author of the English work on poultry recently published by O. Judd, & Co., speaks of them as a delicate race, and says the chickens must be kept out of the damp. If not kept dry they die away rapidly, no one knows how. The pullets will generally lay when six months old, and when kept in an artificially warmed house, and otherwise well cared for, will produce five or six eggs a week during winter.

We are indebted to Thomas B. Smith of Stony Brook, L. I., for the above spirited illustration.

PREPARATION OF LONG WOOL FOR MARKET.—For the last two years I have probably handled more Canada combing wool than any other man in Michigan, and I will only say that to a man of experience, there is nothing easier of detection than stuffed fleeces. My advice to wool-growers is, to wash their sheep well in a running stream wherever this is practicable, shear as soon as perfectly dry, taking care not to let the second growth commence before shearing, as that causes a tender place in the staple and thereby depreciates the value of the wool.

Do not use a box in folding, but after spreading out the fleece on the table, staple side up, turn the flanks inside, commence at the breech and roll up, making wool twine out of the neck to tie around the fleece, which is all that is necessary. All English as well as Canada combing wool is prepared in this way, and it is much better to handle than those fleeces which have four to six strings around them. All dung balls, tags, and unwashed locks should be carefully excluded, for these things injure a man's reputation, and depreciates the value of wool.—*Cor. Western Rural.*

"PERSONS OF PUBLIC NOTE."

The same number of the weekly New York *Tribune* which contained lengthy eulogies on Henry J. Raymond, late editor of the New York *Times*, published also a letter from a farmer in Indiana, in which the following sentence occurs:—

"When we see an obituary published in any of the public papers it is generally on some famous lawyer, great judge, distinguished writer, rich merchant, or pious clergyman. But the poor farmer and his boy must die 'unwept, unhonored, and unsung.'"

In the *Congregationalist and Boston Recorder*, of the same week, we read the following announcement:—

"The charge for notices of marriages and deaths, of only the usual length is twenty-five cents, except in case of CLERGYMEN OR PERSONS OF PUBLIC NOTE. Each additional line *ten* cents."

We did think of preaching a short lay sermon on these texts, but remembering that there is danger of darkening counsel by words, we conclude to halve the matter with "our congregation"—we furnish the text; they the sermon.

It may, however, be proper for us to say that we do not object to the eulogies pronounced on Mr. Raymond. He was an able and an industrious worker, and deserved not only success but the respect of his fellow men. But in the "lower walks of life" there are men who act well their part, and our regret is that there are so few to do them honor. We have long felt that the agricultural papers of the country were hardly doing their duty in respect to honoring the memory of faithful and exemplary farmers, who by their skill and industry have made the desert blossom as the rose, or who have caused two blades of grass to grow where but one grew before. We have occasionally alluded to the subject, and do so now without any definite plan for accomplishing the object proposed, further than to express the hope that no agricultural editor

will ever manifest the spirit which dictated the notice copied from the *Congregationalist*. That "the poor farmer and his boy may not die 'unwept, unhonored and unsung,'" let us, instead of charging "ten cents a line," offer to pay that sum, "except in case of persons of public note."

CUTTING AND CURING CLOVER.

Few persons, comparatively, are aware of the value of clover for farm stock, over any of the grasses which are now cultivated. A fair investigation of the matter would result in covering thousands of acres in New England with clover, instead of timothy, red-top, and other grasses. We invite this investigation by all our readers. If they make it, many of them will be convinced that there is no other way of so rapidly and permanently enriching their farms and themselves, as by the introduction of clover. Not now, but in a future paper, we will lay some facts before them on this point. At present we wish to say something upon the manner of cutting and curing clover, believing that the principal reason why it is not more generally cultivated among us, is in the difficulty of curing it for winter use. The mode which we have practiced is as follows:--

Cut the clover when it is dry, and as close to the ground as possible. This should be done for two reasons: 1. Because the portion of the stems which are left are lost, and secondly, because the after-growth is neither so vigorous nor so weighty, as when the first cutting is taken as low as possible.

Let the clover lay as it falls until the surface is thoroughly wilted above, then carefully turn it over without breaking it. This is usually best done with a fork. If the weather is favorable, it will be sufficiently wilted to put into cocks in the afternoon, and should be done while the hay is warm. If the clover was cut by hand, take it up carefully with a fork and make a row of cocks on the middle one of three swaths. If cut by a machine, and the crop is light, it may require the use of a rake to collect it; if heavy, the fork will be best. The hay should be built into compact, conical cocks, by placing layer after layer, and not scattering, shaking out or exposing it any more than is absolutely necessary. If caps are not used upon the cocks, they should be trimmed with care, and so formed as to carry off as much of the rain as possible, should the weather be unfavorable.

These cocks may remain untouched for two nights, or even three, as the principal process of curing is carried on while the grass is in this condition. They should be opened when there is a good prospect of fair weather. When this is the case, open the cocks as soon as the dew is off, and turn the hay over gently, so that it will lay from six to eight inches thick. At half past ten or eleven o'clock, turn the whole upside down, and at one o'clock commence taking it to the barn.

Nearly every leaf will be preserved by this process; injury from dew and rain will be in a great measure avoided; the stalks will be better dried, and the appearance and value of the forage retained in their highest perfection.

Use caps if possible. It is highly economical to do so. They can be placed upon the cocks in less time than the cocks can be sufficiently trimmed to shed even a portion of the rain, and the process of curing goes on faster under them than when the cocks are bare. Besides this, they prevent the sun and dew from acting upon the grass. An intense sun is almost as hurtful to clover as rain; and, therefore, it should not be shaken out, spread or exposed, oftener than is necessary for its preservation. The more the swath is kept unbroken, the more green and fragrant will be the hay.

When clover is cured in the old way, by spreading, the leaves and blossoms are dry long before the stems are cured,—and when the hay is unloaded at the barn bushels of the former are left upon the wagon, or scattered upon the barn floor, while little but the dry stems have been pitched upon the scaffolds.

If cured in the cock, all parts of the plant dry alike, the moisture in the mass is equalized, and when gathered to the barn, there will scarcely be a leaf lost, while the stalks will be amply cured. A slight fermentation often takes place in the cocks, which, instead of doing injury, is a benefit, as it prevents the hay from afterwards heating in the mow or scaffolds. The secret of making good hay, says Low, is to prepare it as quickly as possible, and with as little exposure to the weather, and as little waste of the natural juices as circumstances will allow. Then the hay will be sweet, fragrant, and of a greenish color.

THE COMSTOCK SPADER.

A few years ago very sanguine expectations of a revolution in ploughing prairie and other smooth land were excited among the farmers of the West by the Comstock Spader. In reply to inquiries in respect to this implement, the proprietors have published a frank statement in the *Prairie Farmer*. To remedy the first great objection to the machine, that of its cost, they built last year a smaller one. But they confess that on trial this spring, it "performs badly on such conditions as it has been tried in Illinois. It clogs up too easily with trash, especially if wet, and with clean prairie soil when wet; this of course rules it out, and we regard that style as a failure, because it will not work on varied conditions enough. This however has hurt no farmer, and the loss all falls on us and our backers."

For the present, therefore, they feel compelled to fall back on the first style, that for which they received the silver medal at Paris. One of those machines they say has worked six hundred acres, and thus proved its efficiency and durability. Still they admit that some of the implements that they have put out had better not been, though they are gaining knowledge — some of it dear-bought — all the while. They believe that they have the right combination of principles, and that the question now is simply one of proportions and mechanical construction, which involve many difficulties it is true, but nothing insurmountable. Their own experiments have demonstrated this to them, but they admit that the public has not that evidence, and therefore farmers are not to blame for the Spader not being popular with them.

ARE SPONGIOLES ROOTS?

If you examine the roots of trees in the spring, especially roots of last year's growth, you will find no spongioles attached to them, but in their place, innumerable little excrescences, each composed of many cells. From these cells, new rootlets are produced, and to these new rootlets the spongioles are attached. These spongioles are not true roots, any more than leaves are true branches, and they never become roots any more than leaves become branches. As the leaves extract nutriment from the atmosphere so the spongioles absorb it from the soil during the growing season. When their work for the season is done, they separate from the roots and decay in the soil, just as the leaves fall from the branches, and decay on the surface. Could we see the entire tree, root and branch, the parts below the surface and the parts above, during the growing season, we should see the roots and rootlets clothed with hairy spongioles like a coat of fur, while the branches are clothed with leaves woven into tissues of various forms and degrees of thickness and firmness. When the growth for the year is over, and the season of rest, the sleep of winter comes on, both leaves and spongioles are thrown off, and the tree, divested of all its clothing, remains naked and unprotected through the frosts and bleak winds of winter.

GOOSEBERRIES WITHOUT MILDEW.—In a reply to a correspondent who asks if gooseberries can be grown without mildewing? the *Gardener's Monthly* says, nothing is easier than to grow gooseberries. It is a mountain fruit, and does not like a *hot soil*. Plant it so that the hot sun will pour down on the *clearly cultivated* earth, so hot that you can fry a beefsteak or poach an egg on it, and you cannot get gooseberries. But set your plants across the lot in a pretty thick row, and pile up about the plants five or six inches deep of old brush wood, old corn roots, old leather boots, pots, or kettles, even, if you cannot get anything else, so that the roots will always be near the surface, and yet cool; and we will guarantee you a fortune, if you choose to plant enough. In the best gooseberry plantations of Philadelphia, it is no unusual sight to see rows of them which have been in one place perhaps twenty years, so mounded up with this rubbish, that they look as if they were planted on ridges two or three feet above the level of the earth, and every year bearing abundantly. Not only in the gooseberry, but in all fruits, the public must come to this great fact, that their roots must be kept *cool and at the surface.*

BRICK LINING FOR WALLS.—A correspondent of the *Rural New Yorker*, who has filled the walls of many framed houses in with brick, resulting in a dry wall, warm rooms, and ratproof, rips a lath twice, making three strips about one-half inch wide, nails these to inside of studding three inches from the face, and then lays the brick on edge, slushing at the end, thus keying with mortar on each side of the strip—the first course to be laid flat. A vacuum is thus formed on either side of the brick wall, and therefore must be dry. If you want a comfortable frame house in *any* climate, this is the way to have it.

WOOL AND WOOLEN EXPOSITION.

The American Institute of New York holds an exhibition annually, similar to that held once in three years by the Massachusetts Mechanics' Charitable Association. This year arrangements have been made for a more extensive exhibition of wools and of manufactures of wools than has ever been made in this country. It is to be under the immediate direction of the National Wool Growers' Association, and of the National Association of Wool Manufacturers. Notice has been given that the grand structure which has recently been erected in the north part of the city of New York for this purpose will be opened for the reception of this class of goods on the first day of September, 1869. Exhibits for the Machinery Department can be sent earlier. The whole exhibition will be open for visitors on the eighth day of September.

We have already expressed our opinion of the importance of this exhibition to the wool growers of the country. Recent events have deepened our impressions of its importance. We believe that a fair show of the various kinds of wool produced in this country, accompanied by the statistics of its production, with some indications of an appreciation on the part of wool growers of their share in this great national industry, and with some evidence of an expectation on their part of a more distinct recognition of their rights by those who wear fine woolens, or are otherwise interested in their production, is not only expedient but absolutely necessary. Unless farmers are willing to abandon sheep husbandry, they must make up their minds to manage their own business. They have depended on others about as long as it is safe to do so. When they conclude to reap their field themselves, certain "storks" may be disturbed that are now enjoying their nests in quiet.

JOHN JOHNSTON.

The health of this gentleman, which has been quite feeble since last July, we are happy to learn by a letter from him of April 30, in the *Rural New Yorker*, has improved considerably within the last month. He has leased all his cleared land at an annual rent of twenty-five dollars per acre per year, for five years, for nursery purposes.

He is now in his seventy-ninth year, and in reply to a request for his experience in fattenning fine wool sheep, he says, "I am not able to write about sheep feeding. I cannot set my mind to it. My day of feeding sheep and cattle has come to an end. I have just sold my last two fat cattle, one a steer, three years old the fourth inst., the other, his sister, will be two years old a week from to-morrow. The steer weighed, two weeks ago, 1,800 lbs, the heifer, 1,215. I never owned better ones of their age."

Other men may have been as successful in farming as Mr. Johnston, but few have made their success so widely beneficial to others as he has done. His example as a pioneer in thorough drainage and in feeding or fattening cattle and sheep has been highly beneficial. His readiness to communicate the results of his experience in these and all other departments of farming and his hearty, hopeful manner of writing have instructed and encouraged multitudes of young and struggling farmers, who will ever hold his memory in grateful recollection.

DANGER FROM GLANDERS.

A week or two since we published a notice of the death of a man in New York from this disease. Several deaths have been reported from the same cause within a few years past. The Canada *Farmer*, in an article cautioning people to be careful in handling horses with the glanders, details the particulars of the recovery, after a long and painful illness, of a man who got some of the virus into a chap on his thumb. The disease in that case did not affect the nasal membrane. Two donkeys were inoculated at the nose with a little of the discharge from one of his ulcers, both of which died on the seventh day afterwards. As a proof of the subtlety of the poison of this terrible disease, and as a caution to horsemen, the following statement is copied from an English paper:—

A farmer going his usual rounds one morning to inspect his stock, observed a favorite horse in an adjoining field showing symptoms of distress. The horse, on seeing his master, trotted up to the fence, according to his custom. There was a narrow lane between the two fields, and while the farmer was looking to discover what was amiss, the horse snorted or sneezed, and some of the mucus was borne by the breeze over the two fences and across the little lane on to the farmer's face. In a few days the usual symptoms set in, and the man died of glanders as did also the horse. There being no known abrasion of the skin on the man's face, it is

highly probable that this was a case of infection through the mucous membrane of either lips, eyes or nose.

For the New England Farmer.

RHODE ISLAND FARMING.

Having sojourned among the farmers of this beautiful and productive Island a few weeks during the past winter, I venture to record some facts and fancies. The part of the State called the "Island" is connected at the northeast corner with the main land by what is called the Stone Bridge, for teams, also by the railroad bridge. It is about twelve miles long and three broad, with three main roads north and south, and plenty of cross roads to accommodate the farmers.

At convenient distances on the elevated lands are some ten wind mills for grinding grain, and by their sombre and weather-beaten appearance show that they have been in use many years.

The farms are generally separated into small enclosures, from one to ten acres each, and conveniently divided by very good stone wall, most of which has been built so many years that the builders have passed away. On several hills there remain earthworks thrown up by the soldiers in the Revolutionary war. In the northern part of the Island the farms are mostly small and market gardening is carried on to some extent.

Mr. Macomber's Market Garden.

Mr. J. E. Macomber is perhaps more extensively engaged in raising seeds, vegetables and small fruits than any other man, and although his markets are from ten to twenty miles away, yet his early potatoes, cabbage, strawberries, &c., are delivered in such season and condition as to compete successfully with the produce of those who live nearer. On one of his farms occupied by a tenant there was raised on half an acre, 200 pounds cabbage seed that sold for $500; on one-fourth of an acre, cabbages that sold for $130; from two acres of strawberries, there were picked and sold fourteen hundred dollars' worth of fruit. These items, with others, brought in an income in 1867, of $2800 from a very few acres.

He has recently made a plantation of raspberries and dwarf pear trees of the best varieties. He has thousands of cabbage from which to raise seed. They were grown in the fall until the heads began to form, then set closely together in the earth on the north side of a wall, to keep through the winter. Carrot, turnip and beet seed is also raised in this vicinity.

Many of the cottage houses here are inhabited by fishermen, who supply the oil works and the farmers, but the catch for 1868 was light.

W. L. Sisson, a farmer on North Point, used about three hundred barrels of fish on his grass land and crops, for which he paid from twenty-five to thirty cents a barrel.

On the northeast corner of the Island are two coal mines that furnish cheap fuel to the farmers, an establishment for making copper, that has usually used ore from California and South America, but is now engaged on 500 tons from Vershire, Vt., and a fish-oil factory, where fish guano is sold at one cent a pound.

Mr. E. J. Anderson's Farm.

Toward the middle of the Island, on the west road, is the farm of E. J. Anderson, where we have an example of high farming, but not fancy farming. A farm of 130 acres has been thoroughly underdrained, and keeps this winter ten cows, eight oxen, one hundred sheep, and twenty horses. The cows are called natives, having been bought from droves, yet the practiced eye sees indications of various bloods. Two are polled, or hornless; others by fine hair and shape show good breeding, and their present condition, good keeping. They were pastured during the summer months on a ten acre lot that a few years ago was nearly worthless bog. It was underdrained and worked for a crop of corn and barley, and has for a few years past pastured one cow per acre; the cows, however, had sweet corn stalks, sown for soiling, in addition. This crop in 1867, by weighing and measuring, yielded twenty tons per acre. These cows had been fed this winter up to February 3, upon corn stalks. Butter is made in summer, and the calves, sired by a scrub bull, are fattened for veal. Under the barn floor are stored about 1000 bushels of French turnips, from which the fibrous roots were trimmed when stored. These turnips are mostly fed to the oxen that are constantly being fattened. The horses are kept at nine dollars per month, on hay, for the owners, who are city residents. The sheep are of different breeds,—some South Downs, and some that come from Brighton. To furnish mutton, fat wethers are as much needed as nice lambs. Mr. A. has freely expended money in permanent improvements, and has found it pays,—not only returning the money, but quite a surplus besides.

August Belmont's Villa.

The place of August Belmont, Esq., attracts the attention of the passer-by on account of the large trees and the rustic embellishments that adorn the grounds; but the stock would more interest the farmer. Here are one Guernsey, two Ayrshire, and three Alderney cows, and three or four two-year-old Alderney heifers raised by Mr. B., that are of good size and better filled out than young stock of this breed usually are. The cows of all the breeds were imported. At the head of this herd stands a four year old Alderney bull that, by estimate, would weigh 1600 pounds.

In an excellent milk-room, about 8x20 feet, on a double row of racks through the middle.

sat the milk, which is skimmed when twenty-four hours old. Upon examination I found that the cream was nearly one-fourth of an inch thick on milk not over two inches in depth.

This place, I am told, was bought for fifteen thousand dollars, and might have been sold since for thirty thousand dollars. It contains seventy acres. I am more than ever convinced than in trees and well-arranged walks and grounds there is a positive value that will be appreciated more highly as the years pass by.

Mr. Leonard Brown's Farm and Stock.

Still farther east from Mr. Belmont's is the farm of Mr. Leonard Brown, which extends to the shore. He is an industrious and intelligent farmer, who has no fear of investing money in his business. He has sixteen good cows, some of which show strongly the Durham blood; being of large size and in good order. The number of his oxen varies from time to time,—usually three or four pairs. The neighbors say "Leonard Brown don't care what price he pays for cattle, if he takes a fancy to them, but we havn't money to throw away." He says, "I buy good cattle and make more money on a pair that has been fed some, than on a poor pair." His cattle are tied in the stable, as is the almost universal custom here, by the horns with a rope, with about three feet slack. They stand upon earth and not upon plank, and sand is used for bedding. The cattle eat from the barn floor, on both sides,—the oxen one side and cows the other, with stable doors wide enough to back in a cart to remove the manure or to leave the bedding.

The clear beach sand used by the farmers is sometimes drawn three miles. On the middle beach I saw at one time thirteen teams after sand and gravel. This shows the enterprise of the farmers in increasing their manure pile, and is a strong reminder that I and my Vermont neighbors would do well to work our deposits of muck for the same purpose.

Mr. Brown has a flock of forty breeding ewes, South Downs, from Thos. B. Buffum's stock. I find sheep of this blood on many farms from one end of the island to the other, and learn that they give universal satisfaction. He sold his lambs last summer for six dollars each, and many of his ewes bear twins. He has tried the cross of Cotswold buck upon some of these ewes and the half blood lambs seem to dress heavier than the full bloods. The buildings, walls and lots do credit to their owner.

Mr. Walker's Market Garden.

Near by the last places mentioned is a market gardener, Mr. Walker, who had at the time of my visit in February, 37,000 cabbage plants in cold frames for early marketing. They were started in the fall in open ground, and when large enough to transplant were set closely together in the frames, and are kept cool to prevent growing. They were to be set in the lot early in the spring, and mature in July. Mr. W. considers it very desirable to have stable manure freely mingled with the soil, and then use concentrated manure near the seed or plant. His compost heaps are of soil, fish guano, stable manures and night soil.

The southern part of the island is very good farming land and is generally well managed, and the ready market for all produce, from an egg to a fat ox, and the facilities for obtaining fertilizers from the city and the sea, make success in farming almost certain.

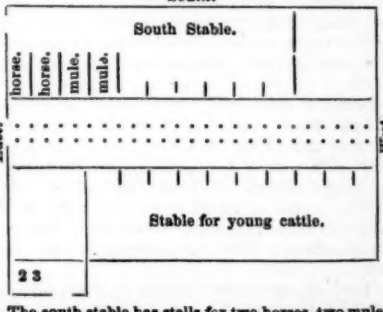
Col. Geo. E. Waring's Thorough Draining, Barn, Stock, &c.

There is a farm of sixty acres in charge of Col. Geo. E. Waring, Jr., author of Elements of Agriculture, and well known as a writer on draining, &c. This farm, I am told cost one hundred dollars per acre, and during 1868 it has been drained at an expense of another hundred dollars per acre. It is situated on an elevation that descends toward the west, with ample fall to afford sufficient surface drainage to satisfy most farmers. But it was poor, cold, wet land, and a great work has been done in putting down tile in ditches forty feet apart. After draining it was ploughed up and but little was raised last year.

I found among the neighboring farmers a disposition to criticise and almost to censure the expenditure involved in this improvement, and they ask "what will he do with the land?" For my part, I have faith in the tiles. With this large plot of smooth land now in one field, the partition walls having been removed, I can see that soiling can be extensively and conveniently carried on; all labor-saving machines can be used to advantage, and the soil will be dry and warm and yield up its stores of plant food whether the season is wet or dry.

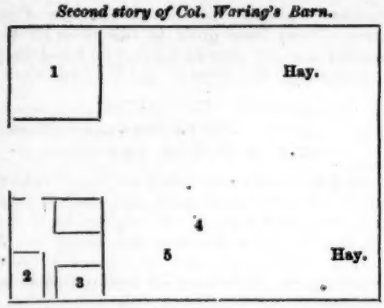
Then a spledid barn has been built with cellar for manure, the size of which I did not ascertain, but judge it to be 50x100 feet.

First story of Col. Waring's Barn.



The south stable has stalls for two horses, two mules, and ties for several Jersey cows, which stand on a slatted floor though which water passes readily. The dotted lines represent a railway on which runs a car with steamed food, &c. Fig. 2 represents the position of the steamer, and Fig. 3 a barrel for cooked food for swine.

Second story of Col. Waring's Barn.



The whole of this floor is level, with no posts or partitions, except those at the corners to prevent a free passage of a horse and cart. Fig. 1 represents the water tank; 2, the steam box; 3, the meal chest; 4, the horse-power; 5, the straw cutter.

The first story is designed for stables, and the second story for storing forage. In this second, on the left hand as you enter, is a reservoir of water that is filled by a forcing pump, run by a wind-wheel, situated quite a distance out in the lot. From this reservoir, pipes conduct the water down to the stable where it is carried along in front of the cows, with a trough for each animal, from which it can sip at pleasure. In the right hand corner of the barn, as you enter, and opposite the reservoir, is a room for keeping meal and grain; it also contains a box, in which hay is steamed for the cattle. The steam boiler being in a small room attached to the barn, the steam is conveyed in pipes to the bottom of the feed box. The quality of the hay that was fed at the time of my visit, was poor; having cost only $12 per ton, or less than half the price of good hay; yet the cattle and horses ate it without waste. The feed was cut by horse power.

Steaming hay is another innovation that is looked upon with distrust by most farmers, yet it is evident to me that it is both reasonable and profitable, and can be conducted with so little expense that it will pay. But it will be adopted only by those who love their cattle and desire to do well by them, and to make the greatest profit from them. When one sees how simple is the apparatus necessary, many of the objections to steaming cattle food will appear less forcible.

The cattle chosen by Col. W. are not yet popular among the mass of farmers, but it may be that the same experience that proves draining and steaming profitable will place the Jersey cattle in advance of all others for a butter dairy. There are about twenty head of Jerseys here. Two of the cows cost nine hundred dollars. However well they may do at the pail they do not satisfy the eye, and should not be bred extensively where working oxen, beef and cheese are as desirable as butter.

In regard to draining, one old farmer said to me that "Horace Greeley told us in an address before the agricultural society that 'the farms ought to be drained to be worked to the greatest profit;'" "but," said my friend, "that is a foolish idea, because for two months in the summer we are now dried up as hard as a brick, and if we should dig ditches and lay tile, so as to let the warm air underneath, it would make the land so hot we could not raise anything."

Now I have walked the length of the island five times, by all its different roads, and several time across it, through the fields, through the pastures, where the turf had been broken up by the feet of cattle, where moss is growing rankly, where blackberry and other bushes are working in with poor pasture grasses, and I fully believe Horace Greeley was nearly right. Draining would make many acres of now unprofitable land, the most productive. The success of Messrs. Anderson and Waring will doubtless prove that warm air in the tiles will not be so disastrous as cold water in the soil.

Good, well-managed farms are so plenty near Newport that it would perhaps be hardly just to speak of any to the exclusion of others. One thousand dollars per acre have been offered for one farm of ninety acres. Another farm of 100 acres rents for seven dollars per acre, and the tenant pays the taxes; but the income from a flock of sheep of less than 100 pays the rent. Another man, speaking of sheep, said that he received over $30 each from several sheep he wintered. The sheep had twin lambs in the winter, and in June the three sold for nine dollars each—$27, leaving the fleece of six pounds of wool to make up the balance, It is evident that the value of land does not decide what kiud of stock shall be kept. But all pays a profit according to the way it is managed.

Mr. Maitland's Villa, Deer, Breton Cattle, &c.

The place of R. L. Maitland, just north of the city of Newport, has many objects of interest, but few can be mentioned without making this article too long, I fear. The American deer are kept in an enclosure of perhaps an acre, surrounded by a picket fence ten feet high. This yard contains many spruce, locust and other trees, and a thick grove around the outside. There are now only twelve deer in the park, most of which are young animals. Eleven were shot a few weeks ago and taken to New York. Their food is corn, of which they consume half a bushel a day, eating it from troughs like sheep, and twice a week carrots or beets. They are not fed hay. They are as wild as common sheep. They breed freely. This herd was commenced a few years ago with two does and a buck. There are many amusements more costly and less useful than keeping a few of these beautiful animals.

The Breton cattle are represented here by a mature bull, *Tom Thumb*, three and one-half

feet high, five and one-half feet in girth, color black, horns large. This race is the most diminutive specimen of the genus *Bos*. Of two nearly mature heifers that came of this black stock, one is red, the other light red and white, —an uncommon occurrence.

The Alderneys are more numerous. The oldest bull *Duke*, a fine large animal, is estimated to weigh 1700 pounds. *King Phillip* is younger and less in size, but good in the Alderney points, and valued at $1000. Several cows, valued at $500 or more each, and young cattle. But these are only a part of the cattle owned by Mr. M., as he has other farms in other places.

I did not learn the yield of butter from any single cow. The Alderneys, however, sustain their good reputation as dairy cows. The Bretons are smaller and smoother built than the Alderneys, and are valued for their milking qualities.

The stock of poultry here comprise Cochin China, Golden Polands, Silver Pheasants, Dorkings, turkeys, &c. And it may be worthy of mention that on nearly all the farms on the Island there are large flocks of poultry, which number in some cases, one hundred and fifty fowls; several flocks that I saw included some thirty turkeys, thirty geese, and twenty ducks. I did not see a flock of pure blooded hens of one kind; a mixture is usually kept. By many farmers, geese are considered very profitable. The kinds kept are the White Bremen, the Mountain or African and the real Wild Geese. A flock of wild geese can be seen near the South Portsmouth post-office. The head is small, neck small and black, back dark, belly light. The geese are not picked while they are alive by most of the farmers, but are kept for the profit of the goslings and the feathers and bodies when killed. I did not learn that the profit from eggs and goslings was larger than the income from live geese feathers which might be plucked three or four times during the summer. I saw one flock of October goslings, but it is unusual for geese to lay and hatch in the fall, and if they do so it is in consequence of good keeping, and not because they were not picked. The fowls generally seem to be well cared for, and are expected to yield a good profit, as the summer visitors at Newport wish the best of everything and pay prices in proportion.

The best poultry house I saw was at the farm of August Belmont, Esq. It cost one thousand dollars. It has four rooms as well finished as a dwelling house. The cupola on the roof is a beautiful pigeon house.

I have thus briefly referred to a few items in Rhode Island farming. A farmer from any section of the country would find pleasure and profit in observing the management of these farmers, whose success has given them the confidence, self-esteem, and business habits that usually accompany prosperity. But here, as elsewhere in New England, one cannot but notice and regret the absence of the sons of farmers. They have gone to trades or traffic, and left the old men to depend on hired help.

Irasburg, Vt., 1869. Z. E. Jameson.

For the New England Farmer.

HALF A DOZEN FARMERS.

As parents love to speak of their children and tell of their prosperity, so I want to speak of a few individuals of my neighborhood family, and tell the world how they prosper. As I have been here only two years, I can of course go but little back of that period in my biographies.

I will begin at the south part of the town, and proceed northward. The first farm which I will mention was some few years ago all "run out." The man who now occupies it is a wide-awake chap, and is reaping double the produce, by leading the water from a pond and emptying it on his mowing field, and by looking well to his manure. He keeps his yard filled with muck, minds his own business, and is ready to do his neighbor a good turn, and is never behind in any enterprise.

A few rods north we find a neat little farm, carried on by a real six-foot Vermonter. His parents are growing old and somewhat infirm, and the young man has his own way. And well may he be trusted, you would think, if you were to see his wheat and other crops, or if you were to peep into his ash-house, filled as it was last autumn with good ashes from the lime pits at St. Albans, or near that town. He has enlarged his barn once, and must do it again immediately.

Going north of this place, some one hundred rods, I turn to the east a little, and find a smallish farm. The occupants consist of an aged mother, son, wife and two orphan children. They look and act as though a cloud had never passed over them, but had always lived in the cheerful sunshine. Love and good will beams in every countenance, with hearts as large as their bodies. Invoking God's blessing on this household, I bid them good-bye, and proceed still northward some fifty rods.

Here is a small house occupied by an aged couple, with the son and wife and two children. This farm is now carried on by said son, who has been in possession only two years. From the timber and lumber that has lately made its appearance on the premises, I am led to postpone further comments till I learn what it all means.

Moving on some twenty-five rods further, we find an old settler and his wife, aged almost eighty years, both smart and still enjoying life. A son and wife, with four children, make up the family. The young man, who now manages the farm, enlarged his barns a few years ago, and must soon build still larger. As he is one of the Town Fathers, it may not be expedient for me to enter into details, but

as his fields produce "more than a plenty," he is not only willing that others should be fed and clothed and warmed, but ever ready to show that willingness by deeds as well as words.

Another twenty-five-rods' travel brings us to a farm occupied by a middle-aged man, wife and two boys. He has been on the farm some four years. His crops have about doubled. He, too, must build, or his stock and fodder must be left out doors. If you want to find him at his house in the morning, you must start early.

I might go on further, but I fear others may not be as much interested in my neighbors as I am myself.

These six farms embrace about 600 acres; from which were raised some 200 bushels of wheat, 300 of corn, 700 of oats, 700 of India wheat, 1500 bushels of potatoes; some 5000 pounds of maple sugar were made; about 200 tons of hay harvested; over $2000 worth sold from dairy and hog-yard, besides beef, poultry, &c., and on all these six farms I think there was not paid out for labor in the house and on the farms the amount of $125.

What think you? Can these chaps live? Do they make farming pay? If you still have doubts, come up and see the oxen, steers and fat sheep sent from this district, and mingle with the men that raised them.

Now if any one can make a better show of his neighborhood family, I will lay down my pen and say that, in waking up somebody, my object is accomplished. We want to wake up these lords of the soil. We wish to do them honor and we wish them to honor themselves. We want to hear from them. It is in them; they can drive a good bargain, and we think they can drive a smart pen.

And now, Mr. Editor, if you think this all bosh, throw it down, and take a glass of my home-made, four-years old pie-plant wine, and I will remain your well wisher,

V. Baker.

Brookfield, Vt., 1869.

Remarks.—This is a pleasant look at a pleasant, prosperous neighborhood of farmers. Scattered over the country, we believe there are many similar neighborhoods, and we unite with Mr. Baker in the hope that his statement will induce others to look about them to see if some other six farms may not furnish as good a record. We have had photographs of fancy farms about long enough. Now let us have pictures of real country home farms that support their owners and their families.

That bottle of wine found its way to an old lady who said it was a most excellent cordial,—just what she had been wanting all the spring.

For the New England Farmer.

TOO MUCH WORK.

It is said that more than one-fourth of the lunatics of the country are farmers and merchants, and among the reasons assigned for crazy farmers, are too much work and too little recreation. Now what is the remedy for this deplorable state of things?

For my own part I was slow to believe the above statement as applicable to us here in New England, notwithstanding our farmers are supposed to be the hardest working agriculturists of any in the country. But I know of many who work too hard for their real interests, though their keen Yankee sense seems bright and sharp as ever. The motto of these men is, "better to wear out than rust out." So it is; but what need of doing either? There is no real virtue in too much work. On the contrary, is it not a sin for one to tax unduly the strength and energy of a body so fearfully and wonderfully made.

Much is said in these latter days of beasts of draft and burden being overworked by merciless masters, and societies are specially organized to prevent such cruelty. May not some farmers be justly accused of being their own worst task-masters? And now that the busy season comes on apace, let me just sound my feeble note of warning.

In all our farming towns may be found some lazy, shiftless ones, as you may find drones in any hive. There are also able-bodied stragglers, begging victuals from door to door, who ought to be set at work sawing wood to sweat out their sheer laziness. But there is the opposite extreme—men growing prematurely old; nay, killing themselves with hard work. Some are trying to work themselves out of debt. Others are slaves of avarice,—the more they have the more they want. The former class would seem to merit our sympathy only, while the latter merit the condemnation we are wont to pronounce on the avaricious. But some men seem fated to be debtors, and the harder they struggle the deeper they sink in the mire, till the "bankrupt act" finally extricates them. They toil early and late, and work their teams till they give out, but they barely succeed in "keeping the wolf from the door," after all. Meanwhile hungry mouths multiply within doors, till they are in danger of being eaten out of house and home. All their surplus remaining after feeding and clothing their families, is eaten up by relentless interest on borrowed money, till they must sell out and emigrate, or keep toiling on up-hill till death comes at last to their relief.

Some have "too many irons in the fire;" and, between them all, they must needs keep blowing and pounding away till they get their fingers burnt. Always ready to run here and there, sparing neither man nor beast, until they prematurely run their race, and get no credit from survivors for all their manifold labors and favors.

But are there not more who make drudges of themselves, just to make money? Nay, worse, who lay themselves, body and soul, on the altar of Mammon. Of course this statement is not limited to the farmer, nor is the imputation of too much work. Yet in the case of the farmer such drudgery seems more noticeable.

Now, why not slack a little, and not work yourselves to death to find, when all is over, that "as you brought nothing with you into the world, so you can carry nothing out?" It is a relief to know that some have taken the hint, perhaps from bitter experience of sickness and infirmity, brought on by wilful disregard of the laws of health; and that others have finally yielded to the remonstrance of wife and daughters who have plead with them, by the love they bear them, not to work so hard, and give a little more time to those small, sweet courtesies and charities which they had once ignored.

It is true the farmer cannot always keep within bounds, in this matter of work. There will come emergencies in harvest time when he must toil early and late; times when he must make the most of brief intervals of fair weather, and secure his crops at any hazard. And sometimes he has so much crowded into one season, besides his regular farm work, that he must keep all hands toiling to their utmost to get through. But is it not often the case that work falls behindhand or is crowded for want of some system and wise forethought? Worst of all, some old-fashioned farmers will persist in taking the hardest way, and plodding on independent of this and that labor-saving machine which would lighten half their load, and give them a new lease of life. In doors and out, it is "work, work, work," and when they are dead, the property, so hardly earned, may go to make only idlers and spendthrifts! W. E. B.

Longmeadow, Mass., June 1869.

For the New England Farmer.

PEAT AS A FERTILIZER --A QUESTION.

On a large portion of the farms in New England may be found a bed of peat or muck, in store for the redemption of the upland soil. In itself alone, as found, this peat exerts no fertilizing power. Though consisting mainly of vegetable matter,—decaying trees, shrubs and grasses,—the tannic acid it contains preserves it from decomposition and sometimes actually prevents its favorable action on the soil with which it is incorporated. Plant an apple or a pear tree in pure peat, and it dies. The tannic acid poisons many kinds of cereal and leguminous plants, and hence some farmers have become prejudiced against the use of it. But peat itself is mainly vegetable fibre,—geine, humus,—the natural food of plants and trees. The very small per cent. of tannic acid it contains renders it obnoxious. Eliminate this, and then we have in peat one of the very best fertilizers nature holds in store for us.

But what are the best means of doing it? This is an important question, and whoever rightly answers it will do more for agriculture than ever has been done by any Liebig, Burns or Davy. Dr. Dana, to be sure, did something. His "Muck Manual" should be in the hands of every farmer. But much more must be done. An alkali destroys an acid. But what is the cheapest alkali? What is the best mode of applying it? Here is the problem. One load of peat now good for nothing, how shall I best, cheapest, and quickest change it to a load of good manure? What are the easiest, readiest, and surest steps? Good questions these for the advanced class in our new agricultural college.

"Combine it," says Dr. Dana, "after it has felt the frost of winter, with one half a load of barn manure." This will do it; but time is taken and the barn manure is soon exhausted. "Use night soil;" but there is no city near. "Take ashes;" but they are twenty-five cents per bushel. "Spent ashes, then;" but the alkali,—the very thing you want,—is taken out of them. "Well, soda;" ah, but that costs money. "Liquid manure;" but the supply is limited. "Then lime;" this, too, costs money and is slow in action.

We have tested all these agents and we think the first the best, especially when the swine have had the range of the barn cellar; but we believe there is a *better* way, which some enlightened chemist will, ere long, reveal to us. As nature, ever provident and prospective in her plans, has compensated for the sterility of our soils by storing away in thousands and thousands of acres of our low lands the *materiel* for the recuperation of our uplands, and as this is the day of chemical emprise and development, it is but reasonable to suppose that the key to the treasure will soon be found. W. Walbridge.

Billerica, Mass., Feb., 1869.

For the New England Farmer.

"CABBAGE WORM."

Mr. Editor:—In your last issue, Mr. Towles of Alburgh, Vt., complains that his cabbages have all been destroyed "by a worm formed by an egg or nit of a white butterfly deposited in the head of the cabbage," and wishes to know what can be done to stop its ravages.

Before his question can be properly answered, we must inquire whether he knows or only thinks the butterfly to be the parent of the worm. If it is really so, I suspect this to be a recent, most unfortunate importation from England. Several years ago, a butterfly called *Pieris rapæ*, which has sometimes done great damage in Europe, was discovered about Quebec and has since spread into north-

ern Maine and Vermont. I have not yet heard of its doing any serious injury, but it certainly will as its rapid increase proves its accommodation to the New World. This pest was not needed, for we have now a very near relative first described in your paper, by Dr. Harris as long ago as 1829 (see NEW ENGLAND FARMER, old series, vol. 7, p. 402) under the the name of *Pieris oleracea*. This insect has sometimes plundered our kitchen gardens,—turnips being apparently its favorite food. In the cabbage butterfly, some distinct black spots may be seen on the upper surface of the front wings; in the turnip butterfly, these wings are pure white; both species produce two broods a year,—one in May and the other in July; the butterflies are of feeble flight and can easily be taken in a scoop net and destroyed on the spot; this is perhaps the best way of keeping them in check.

I should be glad to receive from Mr. Towles specimens of the butterfly and worm which have troubled him, and as full an account as possible of the nature and extent of its ravages. You will see by the circular I send that I am preparing an extensive work on New England butterflies, and information or specimens of the insects in any of their stages, will be acceptable from every quarter. I hope, in return, that agriculturists may find something in my work to assist them. Very truly yours,

SAMUEL H. SCUDDER.

Boston, May 31, 1869.

COLORING CHEESE.—Fashion governs the style and color not only of our clothing and our dwellings, but even of our food. As one passes through our market, men and boys may be seen dressing up in "Boston style" boxes of strawberries that are received from the South. The best berries must be placed on the top of the box in a neat manner to sell well. So with cheese, there is a fashionable color, without which it will not bring the highest price. In a late article upon this subject in the *Utica Herald*, Mr. X. A. Willard, although personally objecting to color, says the market demands a rich, even color and will not be satisfied without it. As a matter of dollars and cents, not of principle or taste, he advises manufacturers to keep up the color. He has never heard of a lot of cheese being condemned because it was too nicely colored, but has heard of complaints and losses because cheese was too pale. He says: "We have reports from some ten or a dozen factories in Vermont. They have started well, and promise a fine make for the season. But they are making their cheese *too pale*. They must pay more attention to color, if they would command the highest figures."

TIME OF CUTTING HAY.

UNE and July are the great haying months with us in New England. In many sections the experience of farmers during the past winter has afforded an expensive argument in favor of the importance of this crop. We suppose that the barns of New England have not been as empty for many years as they are this spring. We see it stated that Levi Snow of Dover, Vt., has been feeding out hay this spring that has been in the barn thirty-four years, and it came out green, bright and sound. Cattle ate it as well, and it was as good in every respect, as hay grown last summer. It is important then that this harvest should be secured in good order. And although we discoursed last week at some length on the best time and manner of securing this crop, we think our readers will find something of interest in the following brief abstract of the statements made at a discussion of the subject of haying by the Massachusetts Board of Agriculture during its session at Amherst, last December.

Mr. Hyde of Lee, and Dr. Fisher of Fitchburg, stated opinions and facts of much importance, that cannot fail to meet the approbation of all sensible and observing men. The more completely hay retains the properties of grass, the better it is. The sugar and starch in the juices of grass, constitute its most important elements. Its nutritive value depends upon the amount of sugar and starch it contains. As the seed stalk grows up and the seed ripens, the sugar and starch are converted into woody fibre, which can yield no nutriment unless it is reconverted in the stomach of the animal into starch and sugar. The grass blade—the leaf—is its most nutritive part, and when the blade is most fully developed, and in its most succulent state then the grass is in its

best condition, and contains the greatest amount of nutriment, and should be immediately cut and cured. The leaves are reservoirs in which sugar and starch are accumulated for the use of the stalk in forming the seed—and when the seed vessels are formed, the sugar and starch are rapidly drawn from the leaf vessels to be converted into the substance of the seed.

Whether the hay is to be fed to cows in milk or horses at work, it is much better if cut early than if cut late. Woody fibre affords but little nutriment, and if our animals are to obtain their living from it in the winter we had better turn them into the woods and let them browse, than to be at the expense of laying up wood for them in our barns.

Dr. Fisher said, "I cut my herdsgrass between the 13th of June and the 3d of July. I cut it before it had shown a blossom, and I should be willing to put that hay before cattle, by the side of any other hay, and if they did not choose mine in preference to any other, I should be very much mistaken."

Then if the crop cut thus early is not as heavy as it would be cut two or three weeks later, you will get a second crop, not of rowen, but of hay of good quality, dried grass, as valuable in proportion to its weight, as the first crop. What we want as food for cattle and horses, is *dried grass*, not bushes, coarse or fine. When seed stalks have formed on grass, cattle will not eat them, if they can help it. We find them cropping the short green blades near the ground, and avoiding the full grown woody stalks, and they would do so in the winter if they could separate the blades from the stalks in the hay.

Says Dr. Fisher, "I have two horses now which have been kept for some years upon six quarts of meal, and pretty late cut hay. It required that amount to keep them in condition. I now give them only two quarts of meal (and have given them only that quantity for the last year and a half) in combination with hay that I cut early, and they are in better condition than they were two, three or four years ago. I consider them as good arguments as I can produce. They certainly thrive better on two quarts of meal and the hay they get now, than they did formerly upon six quarts of meal and late cut hay."

Says Mr. Hyde, "The grass of Massachusetts is probably cut a fortnight ealier than it was ten years ago. Towards this result the mowing machine has greatly contributed, as it enables us to finish the hay harvest with great dispatch.

"The true principle of haying, we think, is to secure the hay at a time when we can harvest the largest amount that shall be like grass in its perfect state; and this we can do when the grass has attained its growth, and before the starch, sugar and gluten of the plant have gone to the formation of seed, or been converted into woody fibre. The starch and other nutritious compounds are on the increase as long as the plant grows; but with blossoming, growth ceases, and now is the time with the least labor to secure the greatest amount of forage in its best condition."

This is the true theory; and when the practice shall be fully up to the theory, we think the hay crop of New England will be worth at least twenty-five per cent. more than it is now. Another advantage, too, we think would result. The cows would yield a full flow of milk with half the corn meal and oil meal which they now require, and which, by their unnatural stimulation, keep them in a feverish condition and produce frequent abortions, unhealthy states of the milk vessels, and various other forms of disease, which render them short lived and greatly diminish the profits of the dairy. Were the cows fed on *well cured grass* they would require but little more grain in winter than in summer, just enough to make up for the difference in temperature; they would be more healthy, and of course their milk would be more healthy. Much of it now is fit for anything else rather than for human food. In his lecture upon the dairy, Mr. Willard of New York said, "If you have any diseased cows, do not mix the milk of those animals with the milk out of which you are going to make your butter and cheese, but throw it to the pigs."

Prof. Gamgee said, "Don't throw it to the pigs." And yet, how much such milk do we give to the children!

Experimental Farms.—The French Emperor has nine example farms in Gascony, eight in Champagne, three in Cologne, one in Limceusin and one in Italy. These twenty-two farms pay him on an average four per cent. on the capital invested.

A TENANT FARMER.

A few days since one of the Editors of the FARMER had the pleasure of receiving a call from some relatives whom he had not met for forty-four years. The strange work which this lapse of time had made with boys and girls who were once playmates, is a matter in which the public has no interest. But as our friends are farmers who, commencing with hired land, have paid for a large farm from the profits of farming, we claim that a brief sketch of their agricultural history may be considered as public property, and believe it will be interesting to our readers, and particularly to that portion of them who are now young, and are balancing the probabilities of being able to pay for a good farm by farming. We will, therefore, at the outset, introduce our friends as Mr. and Mrs. JOHN BALIS of Benson, Rutland county, Vt.

On their marriage, the estate of the husband and the dowry of the wife, consisted of two pairs of willing hands, habits of industry, and "great expectations" of success,—rather an old fashioned, but after all not a bad "setting out." Having caught his bird, but not having a cage of his own, Mr. Balis found shelter in his father's house, and entered into partnership with him in the management of his farm of 150 acres in the town of Hubbardston, Vt., adjoining that of his present residence. Here he remained until twenty-nine years of age.

On a mutual division of the increased stock and land, Mr. Balis' portion was appraised at about $1600. But as yet he had no house,—the buildings all belonging to the old homestead, which was retained by his father. For a year or two, therefore, he lived in a hired house, and carried on some land on shares, in addition to the management of his own lot. Eventually, however, he purchased additional land with buildings, and was no longer a *tenant*.

He turned his attention early to raising sheep as a leading feature of his farm management, though he has been quite successful in wheat-growing. From the avails of his crops he was enabled to buy more land. One of the most lucky of his purchases, he informed us, was a lot of wild land for $1350, from which he sold, in one year, wood and wheat to the amount of $1500, over and above all expenses of labor, &c. But such "good strikes" were not often made. Mainly by small gains and small savings, he now finds himself, with his two sons, in possession of fourteen hundred acres of land, in a tolerably compact form, in the rich valley of Lake Champlain, on which there are in all six dwelling houses, twelve large and several small barns, with sheds or lean-tos sufficient for 1200 sheep, and stabling for thirty horses and cattle; with which amount of stock he entered the past winter. During the season he has, however, lost some two hundred sheep—a very unusual mortality for him. His sheep are grade merinos, and average from four and a half to five pounds a fleece.

His sheep sheds or lean-tos are built the whole length of the barn to which they are attached, and connect with the cellar under the barn, in which the sheep are fed, and where they find a warm place in cold weather.

He now mows over about 400 acres, which average about one ton per acre, and we understood him to say that he has this year full fifty tons more than his stock required.

From three to six acres are sown to wheat each year. This year he has sown six bushels of wheat, and as usual, on land on which corn grew the previous year. It now promises a good crop. Last spring he sowed six bushels and harvested one hundred bushels. The year before, he sowed three and a half bushels and harvested seventy-five. Three years ago he sowed his wheat on low, flat land, and in consequence of unusually wet weather the crop was a failure. The ground was well prepared and with a favorable season, he anticipated a good crop. Have your ground in good order, he says, and sow as early as possible, say from the 20th of April to the 10th of May, on good rich soil, and you need not fail once in ten years in raising all the wheat needed in the family.

He raises from six to ten acres of corn a year, which yield from fifty to seventy-five bushels of shelled corn per acre. He applies about fifty loads of manure, and that leaves the land in fine condition for wheat.

Of potatoes, he plants from four to eight acres, usually on sward land; and generally has about fifteen acres in oats.

For corn, he generally ploughs the manure in, and plants two years, and "stocks down" with wheat or oats. Mows from two to four years, and obtains good crops of grain and grass. For potatoes he takes sward land; sometimes, but not as a general thing, growing two crops, then manures well, sows oats and seeds down.

Such land as he does not wish to plough up, he top dresses, preferring to do this immediately after haying when possible, as the fall rains dissolve the manure and start up the grass; thus making a good crop more sure the next season, than if it were applied in the spring. If applied very early in the spring, say in March, and if the season is not too dry, it does well; but if the season is dry it has less effect. He uses no manure except that made on the farm.

He has built some 1200 to 1500 rods of cedar rail fence, the material for which was drawn ten miles, and some 400 to 500 rods of pine stump fence, dug from his own land.

Mr. Balis informed us that in ordinary seasons, and with ordinary health and ordinary expenses, he could support his family without much encroachment on the sales of his wool, which must certainly be regarded as pretty good evidence that there is profit in farming in Lake Champlain Valley, if no where else in New England.

He informed us that friends in Illinois, near Chicago, have repeatedly urged him to sell his farm in Vermont and try the West. He has visited there occasionally, having just returned from a trip through Michigan to Illinois, at the time of our interview. We give the result of his observation, and his conclusions as to the comparative advantages of Vermont and Illinois, in his own words:—

"It is generally thought," he said, "that the West has great advantages over New England for farming. I made considerable inquiry out there about farms, crops, the price of land, &c., but I cannot see wherein they have the advantages that are generally conceded to them by farmers in New England. In the section I visited, improved farms are held at $50 to $150 per acre, with not near as good buildings as we have here in this section of Vermont on farms that can be bought to-day at from $20 to $50 per acre, with plenty of water of the best quality, good roads, good schools and good improvements generally.

"Then again, Western farmers do not raise as much per acre of most kinds of grain as we do. It is true that their land is worked more easily than ours, but it is less favorable to the production of grass. Hence they plough more land than we do, and consequently have less pasturage. Most of the stock that I saw there this spring was poor. This may not be the case in other sections, and probably is not among farmers who make a business of fattening cattle.

"When I left home I felt rather discouraged by my unusually large loss of sheep during the past winter. But I found that the mortality among the flocks in Illinois had been so much greater than with me, that my loss seemed trifling in comparison. Individual farmers, in the vicinity where I visited, who commenced the winter with from 400 to 500 sheep have lost nearly their entire flocks, from the scab and grub in the head, as is generally supposed. Wool growers both East and West are becoming much disheartened.

"I hope that young farmers who are thinking about going West will look at all these things thoughtfully before they start. 'Distance may lend enchantment to the view,' but it may cost something to learn that 'all is not gold that glitters.'"

In reply to our question whether the advance in the price of land or other causes had made the chances for success on the part of young men who are now beginning life without capital less favorable than they were when he began business for himself, Mr. Balis remarked that he thought not; he believed that so many young people are now leaving the farm for other pursuits that the opportunities for industrious, reliable young men who are contented to remain on the farm, were never as good as now; and he said that he knew of fine openings in his own neighborhood, and elsewhere, for those who are willing to work and to live economically.

POTATO BUGS.

The losses sustained by farmers in consequence of bugs and insects appear to be increasing as the country grows older. One result of these losses must be a more general study of the habits and character of these insects. Inquiries or complaints are often made of *the* grain weevil, *the* cut worm, *the* potato bug, &c., while there are often a great variety of these insects. A long article was published last year in the *American Entomologist*, an excellent illustrated monthly publication, at one dollar per year, on potato bugs, in which ten different bugs were described, with cuts of each. The *Utica Herald* gives the main facts of that article in the following brief abstract:—

In the United States there are no less than ten distinct species of bugs that prey upon the potato plant; and many of these ten species are confined within certain geographical limits. The habits and history of several of these varieties vary as widely as does that of the hog from the horse. Some attack the potato in both the larva and the perfect or winged state; others in the winged or perfect state alone, and yet others in the larva state alone. Some of these insects raise but one brood of young every year, while three of them raise two or three broods; each generated by females belonging to the preceding brood.

Three of the ten feed externally upon the leaves and tender stems, while two burrow, like a borer, exclusively in the larger stalks. Almost every one of these has its peculiar insect enemies; and a mode of attack which will prove successful with some of them, will very often turn out worthless when employed against others. And here it occurs to us to suggest that when a writer or editor talks of the potato bug, he give its scientific name, to avoid confusion. This failure of writers to give a name by which all can distinguish the individual species—as well of insects as varieties in plants—is the cause of much misunderstanding and prolonged discussion.

We are enabled in this abstract to give only the names and present some of the more common characteristics of the different families of these pests.

First we will take the "Stalk Borer." (*Gortyna Nortila Garence.*) Its larva is not peculiar to the potato, as it also infests tomato, dahlia, aster, and other garden flower-stalks. The larva leaves the stalk the latter part of July, descends a little below the surface of the earth, where it changes in about three days into the chrysalis state, and emerges as a perfect moth from the last of August to the middle of September.

The potato stalk weevil (*Baridus trinotatus*), according to Dr. Harris, is a more pecu-

liarly southern species,—ranging from the Middle States south, and unknown in New England. In some places it utterly ruins the crops. So far as known it infests only the potato plant.

The potato, or tomato worm (*Sphinx maculata,*) is well known to tobacco growers as the tobacco worm, and moth, and needs nothing further explanatory.

The striped Blister beetle (*Lytta vitata*) follows. Four varieties are mentioned as belonging to the Lytta family. They are only destructive of the foliage of the plant in their perfect winged state, living and feeding on various roots, under ground, in their larva state. They belong to the same family as the Spanish fly, and will raise just as good blisters as that does, and are equally poisonous taken internally in large doses. The striped blister beetle is almost exclusively a southern species, occuring some years very abundantly. This beetle is said to take all other varieties of potatoes in preference to the Peachblow, and may be destroyed by driving them off the vines with a bush, placing hay or straw between the rows in which they will seek to hide, and burning them.

We have next the Ash-gray blister beetle, (*Lytta Cinerea.*) It is found more commonly in the northern part of the northern States. It attacks not only the potato, but honey locust, and English or Windsor beans. It has been known to swarm upon every apple tree of a small orchard in northern Illinois, eating the foliage and gnawing the young apples.

Next is the Black Rat blister beetle, (*Lytta Murita,*) which is often mistaken for the black blister beetle, (*Lytta Afrata*) from which it differs only in having four raised lines placed lengthwise upon each wing-case, and by the two first joints of the antennæ being greatly dilated and lengthened in the males.

The Margined blister beetle, (*Lytta Marginata*) is a species easily recognized by its general black color, and the narrow ash-gray edging to its wing. It usually feeds on cercertain wild plants; but in Wisconsin and Illinois it has been known to feed on the potato vine, and been taken in company with the striped blister beetle, and is known to be increasing on the potato.

These are only a portion of the many varieties of "potato bugs," but the list is believed to embrace the most injurious of them. A knowledge of these varieties, of their manner of breeding, and of their habits, will aid materially in furnishing data which shall be of service in planning more efficient means for their extermination.

Corn or Witch Grass Land.—The land where I raise my corn is full of witch-grass. I plough in August six inches deep, harrow two or three times in the fall when it is dry; cross plough late in the fall two inches deeper, and let it lay up to the action of the frost during the winter; harrow down in the spring; plough ten inches deep; harrow; furrow deep; dress with a shovelful of barn dressing and a spoonful of phosphate of lime to the hill. I have killed the witch-grass so that it takes less time to cultivate the crop properly than it would with one ploughing. The land is in fine tilth, stands the drought better and produces a much better crop; the ground is in better order for grain, and grass seed catches better and is not choked out by the roots of the witch-grass. I planted ten acres of corn last year on interval, with beans between the hills, and raised three hundred and sixty-two bushels of ears—handsome, sound corn as I ever saw.—*Louis Simpson, 2d, of Brunswick, in Maine Farmer.*

RAISE THE BEST CALVES.

We find the following article by our valued correspondent, A. W. Cheever, Esq., of Sheldonville, Mass., in the *Germantown Telegraph:*—

I do not propose to have all the calves raised, but with the present high prices of good cows, it seems injudicious to let good heifer calves go to the butcher. I know a twenty-dollar bill is a temptation to let a good calf go. I could get that price for one now on hand at eight weeks old. I shall not sell her. She drinks well and eats very like an ox. I bought her at four weeks old, let her go without one meal to give her an appetite, then carried her some new milk in a clean pail, wet my finger in the milk, put it in her mouth and gradually coaxed her head down to the milk. She soon learned where the milk came from, and in a few days would drink as well as I could wish. She now has what sweet skimmed milk she will drink, twice a day. It is warmed nearly to blood-heat. Cold milk is sure to give the scours to a young calf. I intend to feed her milk several months and keep her constantly growing and healthy. I give her a lock of hay when I feed the other cattle, and give her some exercise in the yard with the dry cows.

I have raised all my best heifer calves for the last five years, and am getting a good stock of well-behaved cows, much more quiet and orderly than those I formerly picked up in the neighborhood.

I find my heifers are as large at two years as most of those I see are at three. I have them come in about two years. But to have heifers that you will be proud to show your friends, you must not let them get any check in their growth. It will not do to let them out to pasture to shift for themselves in the hot suns of summer or the cold storms of autumn. They ought to have milk till six months old, and a little meal may be added gradually. They ought to learn to eat meal

while young, say before they are a year old, but I do not believe in raising calves on a grain or porridge diet. Milk is their natural food, and I believe they should be raised chiefly on butter farms.

A cow that is poor for butter-making, but good for the cheese dairy, it is well-known, has fat calves. The casein of milk is the part that gives the most nourishment to man or beast.

I know there is an idea quite common among some farmers and others that skimmed milk will not fat a calf; and many experiments seem to favor the idea. But I think the failures have been owing to feeding it carelessly; either sour, too cold or too hot.

I know *my* calves are in demand for veal, and are pronounced extra when fed on clean skimmed milk.

We should not forget to give calves a clean dry bed; and they should be treated kindly at all times. Then quiet, orderly cows will be the result.

AGRICULTURAL ITEMS.

—There were shipped from Vergennes, Vt., between March 1st, 1868, and March 1st, 1869, 278,689 pounds of butter, or 54,000 pounds less than the previous year.

—It is an excellent plan to keep a lump of common chalk in the feeding trough constantly, after the calves are a month old, this will correct the acidity of the stomach and have a tendency to keep them in a healthy state.

—One day this spring, Willie Brewster, of Irasburgh, Vt., a lad sixteen years old, harrowed with a span of horses eleven acres of ground, and after putting up his team went one mile through mud and water on foot after the cows, drove them home and milked nine of them. A pretty good day's work for a boy.

—The sunflower is very useful. Its leaves soon become large enough to be used as a covering for young cabbage and tomato plants. Its stem affords an excellent hop or bean pole, and when dead in the fall, if cut up and kept dry, it answers well for kindling wood. The leaves can be plucked off through the summer without injury to the plant, and dried for fodder, or fed green to milk cows or horses. Its seeds make a fine oil, or chicken feed. It is said to be an absorbent of malaria, and is often cultivated as a preventive of fevers near dwellings that occupy low places.

—Mr. Quinn, who was formerly farm manager for Prof. Mapes, advises market gardeners to raise most of their seeds. In an article in the *Hearth and Home* he says he adopted the plan many years ago of raising the larger part of the seeds he needs, and is well satisfied it is the best and most economical plan. For this purpose the best specimens raised should be selected and used. A knowledge of certain laws of hybridization is necessary, but he says, he considers it less difficult to raise a crop of cabbage or onion seed, than to ensure the successful heading of the cabbages or the perfection of the onion bulbs.

EXTRACTS AND REPLIES.

LAMBS POISONED BY LAUREL.

Mr. W. F. Webster, of Warwick, Mass., informs us that he has been much troubled by sickness and loss of lambs in consequence of being poisoned by laurel. Last spring he tried in a desperate case the application of onions as recommended in the Farmer. He had a lamb so near dead that it scarcely breathed, and could no more hold up its head as it lay on the ground, when raised by hand, than if actually dead. He roasted an onion in hot ashes, cut it, and on raising up the fore leg cut a slit into the skin or integument connecting it with the body and put in the half of the onion on each side, at the same time giving the lamb an injection. The lamb immediately revived. The onions were changed for fresh ones and the lamb speedily recovered. If taken in season he has found about a wine glass of old cider an excellent medicine. Castor oil recommended by H. C. Merriam, if given in season, we believe is one of the most convenient and efficient remedies known.

TOBACCO CULTURE.

In my perambulations amongst the tobacco growers of this region, I notice quite a difference in the state of forwardness of the plants in the different seed beds, even where there is great similarity of soil and location, of manure and glass used, of care taken to sprout the seed before sowing it in the beds, and where all these operations are performed at the same time and with the same anxiety to secure early plants. Now what is the reason that Mr. A. gets plants large enough to set in May, while Mr. B. cannot get them fit to do so before some two weeks later?

This is a question of more importance to the grower than at first would be supposed. Two weeks may materially affect the crop in value. We are in the habit of transplanting our plants from the seed bed, from the first week in June to the first of July, but ordinarily the last set, if they do not get pinched by early frosts, turn out a much smaller leaf, and of inferior quality, generally thick, heavy, unripe, and so can never make a good burning tobacco. These are among the important results of early or late plants. How are we to go to work to obtain early, vigorous plants. Can it be done by a proper construction of our seed beds? We know a carpenter who owns and works a small farm. He is an excellent workman at his trade, famous for *close joints*. Well, he made a hot bed, and the boards were put together with as much precision as he would fit the joints to a staircase. The result was that he roasted his seed. Now if he had set his farm hands to work, with an axe, hammer and woodsaw, he would have obviated that difficulty. He is over nice. His neighbor gets plants early always, and not over four rods distant. Another sows on to his bed Peruvian guano in such quantities that the plants are burned up by it, and only a few make out to live through and get large enough to transplant until the season has so far advanced that they are of no avail. Another uses fish guano, and that, too, kills them We have seen a bed recently with not a plant upon it, all

killed by the fish guano. Now, how shall we manage to secure early plants? This is the all important question.

One neighbor who generally succeeds, says he ploughs in all the manure he can conveniently in the early fall, and ploughs at least twice more, before the ground freezes up. In the spring he rakes in "Russell Coe's superphosphate." This year he was setting plants in May. We think the seed beds should be ploughed as often as once a month after taking off the plants, and the manure applied as early as July, so that the wild seed in the ground and manure may have a chance to germinate, and be destroyed by the ploughing, before sowing the beds. This is our method; who has a better? LATAIKA.

Whately, Mass., May 31, 1869.

SEDIMENT FROM SODA ASH.

I have something like one ton and a half of the sediment of soda ash used in scouring cloth. Can you inform me of its manurial value, and the proper way of preparing it for use on crops or fruit trees. A. B.

May 16, 1869.

REMARKS.—As we were not able to answer the above,—not knowing whether the sediment was gravel stones or something else,—we submitted the query to Dr. Nichols, editor of the *Boston Journal of Chemistry*, thinking it probable that, in the course of his business as a manufacturing chemist, or in his extensive experiments with "doctor's stuff," in making a poor farm in Essex county rich without manure, he had had occasion to make a chemical examination of the substance alluded to. In reply, he informs us that he has never made such examination, and that he does not know what the sediment is. But he presumes, on general principles, that it may be of value to soils. Soda, however, he remarks, we all know is not as valuable as potash and potash salts.

WHEAT CROPS IN MAINE AND VERMONT.

In your paper of April 10, I noticed a statement by Mr. M. E. Rice of Stetson, Me., that he raised 114 bushels Scotch Fife wheat from 5½ acres, using 11 bushels seed, and sowed 1200 pounds of superphosphate of lime on the land. I raised on seven rods less than two acres, 53 bushels of Bald wheat from four bushels of seed. In the fall I spread twenty one-horse loads of muck manure to the acre, sowed April 28, and harvested the last of July. The land the previous year was cropped with oats, without manure. Our rich Vermont hills, with a sprinkling of muck manure, will give us thirty bushels per acre. Try again Mr. Rice.

Craftsbury, Vt., May 15, 1869. E. HATCH.

THE FLEA BUG.

In my communication about the cabbage weevil there is one mistake. I intended to have said the cabbage weevil is the offspring of a fly, as is the onion *worm*, not "maggot." They are two distinct species of insects.

"S. E.'s" inquiry as to what will destroy the flea bug is too late for this season. I suppose he has reference to the small black bug that hops like a flea. They have never troubled my onions. In years past they destroyed my cabbage and summer savory, and eat my vines, but do not trouble me now. They are a very sensitive insect and will not stay where there is an offensive odor. One morning last season I found my vines covered with flea bugs. Having a tub of liquid hen manure in the garden, I put some of it around each hill, and the second day after applied it again. The bugs all left for a patch of potatoes close by. There were thousands of them, but they never again came near the vines. Now if "S. E." will apply hen manure on one side of his onion rows, near, but not directly on the onions just as they are breaking the ground, or a little before, and two days after repeat the application, the bugs will leave. He may have to use it the third time, but a faithful application of it will save his onions.

Chelsea, Vt., June 4, 1869. O. HOYT.

GIRLS LEAVING THE FARM.

In the FARMER of April 3, the girls are accused of leaving home or the farm to seek other employment, as the farm is not fashionable enough for them. That some may have left, I would not deny, but to charge them all with desertion is hardly just. I have in my mind, in not a very wide circle of acquaintance, at least five young ladies, over sixteen years of age, who most faithfully assist in carrying on the indoor operations of the farm, and if occasion requires will don the sunbonnet for a job in the garden, field or barn; and some of them I happen to know are readers of your paper. The girls are not all gone. BATCH.

Wallingford, Vt., May 10, 1869.

PRACTICAL FARMING.—LOSS OF SHEEP.

I enclose $2.50 for your paper another year, hoping that it may long continue, and that more be said about experience in farming by those who are better acquainted with farming than myself. I wish that more farmers would tell how to prepare land for different kinds of crops, &c. I wish to inquire particularly what it is that ails the sheep this spring. I have lost two. They died very suddenly. Whether it is the grub in the head or something else, I do not know. Some of my neighbors have lost more or less in about the same way. E. A. MOORE.

Weston, Vt., May, 1869.

REMARKS.—There has been unusual mortality among sheep in New England and at the West the past winter, and we solicit the experience and opinions of flock-masters as to the cause. Do not wait till you know all about it, but let us know what you have found out.

RAGGED ROBBIN—*Lichnis Flos-cuculi.*

In the FARMER Nov. 30, 1868, I find it said that the well-known Ragged Robin is one variety of Lychnis. I would like to inquire which variety it is, and whether it can be grown from seed?

Royalton, Vt., May 20, 1869. SUE.

REMARKS.— The variety is *Flos-cuculi*. Mr. Breck says in his Book of Flowers that "it is propagated by divisions of the root." We do not find the seed mentioned in Mr. Washburn's catalogue. Mr. Breck says "the double variety is deservedly esteemed, is very ornamental, and flourishes in any common garden soil."

THE CROWS.

Mr. Thomas M. Brewer, in the *Atlantic*, takes strong ground in defence of the crows. He thinks *agriculture is going to the bugs*, in consequence of our "murderous warfare" upon the crows, by which the "harmonies of nature" are sadly disturbed. We are disposed to think that the pulling up of an acre or two of corn in a cold

late spring, disturbs the harmony of nature somewhat also; at any rate, we are sure that it disturbs the economy of the farm. It is bad enough to have to fight the cut worms, without fighting the crows. As to the crows helping us to get rid of the cut worms, that is all "bosh." A little salt and copperas made into a brine, to steep the seed corn in, will do much better. As a dose for the "black ralcals" we recommend twenty grains of strychnine in a gill of warm water, with a pint of corn soaked in it over night. Scatter this on the field. It is cheaper to feed crows in this way than on the corn you have taken pains to plant. J. R.

Concord, Mass., May 3, 1869.

POLLEN.—THE SEASON IN WINDSOR COUNTY, VT.

The weather has been very dry here for some ten days until yesterday, when we had a heavy shower; and after it was over, I noticed a peculiar scum or what seemed like sulphur to appearance, but void of smell. I first thought it might be caused by a new shingled roof, but two of my neighbors tell me they discovered the same thing. I enclose a little parcel of this yellow matter, which I took from the sides of a barrel of the water at the side of the house, and if you think it worthy of notice should like to have it analyzed and a description of it published in the New England Farmer. It may be of no importance, but I never saw or heard of the like before. Grass is looking finely for this season of the year, and June grass is heading out rapidly. The weather has been quite hot of late, till since the shower it is quite cold. The shower was nearly hail, and accompanied with considerable wind, but little thunder. Frank.

Woodstock, Vt., June 6, 1869.

Remarks.—We have no hesitation in saying that the yellow dust or powder which was received in good order, is simply the pollen of pine, spruce or other trees. It is often carried to a great distance by the wind, and its collection on water in noticeable quantities, under favorable circumstances, is not very uncommon. The dry spell preceding the shower you speak of, favored its collection on both old and new roofs. A few years ago it was very abundant about our own residence, and many at first sight called it sulphur.

TO DESTROY WOODCHUCKS.

Feeling indebted to the Farmer for much useful knowledge, I think it but just to communicate such valuable facts as come under my observation. Having been much troubled by woodchucks, especially in my bean fields, for beans seem to be their favorite food, I have tried many ways in years past to thin them out. But this spring I have been more successful. I have adopted the method recommended in the Farmer last year of burning gun-powder in their holes, with this improvement: I add to the powder an equal part of sulphur. A handful of this mixture is put into a small bag, into which I insert the end of a fuse and tie up the bag tightly. It is then put into the hole as far as convenient, the other end of the fuse being left out, when the hole is filled up tight around the fuse. If the burrow has other openings, these must also be closed. Then ignite the powder and sulphur by means of the fuse. This fills the hole with gas, which is death to the woodchucks. In only two cases out of fifteen have there been any signs of life after burning the powder. The cost need not exceed five cents to a hole, and may save dollars. Elijah Myrick.

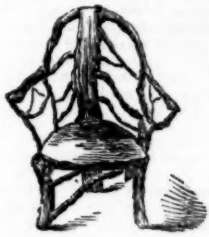
Groton Junction, Mass., June, 1869.

RUSTIC SEATS.

The authorities at Washington have decreed that ship carpenters and other mechanics and laborers employed by government may count eight hours as a full day's work. As it may take farmers who work from twelve to sixteen hours a day for much smaller wages than these men get, some time to see the justice of this decision, we propose that they take hold and build comfortable seats for calm reflection. They may not have much time to occupy them, to be sure; but perhaps after the last cow is milked, they may sit down for a few minutes and compare their life with that of those employed in Uncle Sam's navy yards and arsenals. We would not advise a costly lounge—an "accomplished sofa,"—or anything of the kind. If you have a good sized apple, maple, or any other tree near the house, what say to a seat after this fashion?

No mahogany or rosewood is needed in its construction; no costly tools are required for its manufacture. Crooked roots or gnarled limbs are just the material for its frame work; the more rough, the more rustic; the more curves and ridges it shows, the more fashionable and tasteful will it be regarded by your city cousins, and by the sons and daughters of the eight-hour men, should they honor you by a call.

But if you have no tree or stump against which to build your superstructure, then try your hand at a three-legged chair something after this pattern:—



The half of a spruce, hemlock, pine, oak, elm or other small tree, retaining the limbs, furnish not only the back but much of the elegant lattice work which adorns your pattern. For the other legs and rounds select the most grotesque, ugly looking sticks to be found in the wood pile or forest; no matter if they are so crooked that they

cannot lay still on the ground alone,—and then see how nicely they will look when made a part of the "harmonious whole." Perhaps,

"On such a seat immortal Alfred sat,
And swayed the sceptre of his infant realms."

But whether he did or did not, such chairs are sold in Boston, and adorn the gardens and lawns of its suburban estates. And why may not farmers have them? Oiling will preserve the bark and the wood, but they should not be varnished.

We claim no originality in the above illustrations. They are copied from the *Rural New Yorker*, and answer our purpose very well. We believe that boys sometimes spend a leisure hour as unprofitably as they would in building either or both of the above comfortable seats, where their parents, their sisters or themselves may rest from their labors.

THE CROW AND JAY CONDEMNED.

Of late I have seen several pieces in your paper in favor of protecting the crows. Having been engaged for twenty-five years in collecting birds and eggs for literary and scientific institutions in Massachusetts and other New England States, I have necessarily made their habits a subject of much study. My conclusions in respect to the utility of the crow do not correspond with those expressed in the FARMER. I know that they destroy some insects in the spring, but mostly water insects that do no damage, but many of which prey on other species that are injurious.

But I do also know that crows live almost entirely on the eggs and the young of smaller birds, from the middle of May to the first of August, and that they feed their young on the same, and scarcely anything else. I have no doubt that a nest of four young crows—there are sometimes five—will eat two quarts of young birds or eggs in one day. That they destroy two-thirds of all the eggs and young of small birds I know to be a fact, in some sections. Of some species, I have known them to destroy four nests out of five, and that before the young were a week old.

Now I think that one small bird will destroy more noxious insects in one season than fifty crows. And this is not all. They often spoil large fields of corn when too late in the season to replant. If every crow, jay, hawk and owl could be fed to insects, I think it would be a blessing to the farmer and to the small birds, and I hope no law will be passed to protect crows or jays, for I see them daily hunting for the nests of small birds.

Hudson, Mass., June, 1869. S. JELLISON.

CULTIVATION OF THE INTELLECT.

The importance of manual labor as a means of rest and refreshment to the wearied brain, has often been urged upon the attention of professional people.

By the same rule we would recommend a daily interval of study to the "working classes," so called. There is, to be sure, in farm life, both within doors and without, an abundant call for brain work; yet so identified is it with the hand work, as to possess but little of the recuperative power of studies which have no direct reference or relation to the daily toil. If one who is "tired almost to death," will sit down to the solution of a mathematical problem which is just difficult enough to exercise without fatiguing the brain, he will find himself rested much sooner than if his mind were unoccupied. And so of other branches of science,—a little time given to them each day would be a profitable investment.

But besides the physical benefit to be derived from a regular course of study, there is the value of the knowledge itself, which is certainly worth as much in the meridian as in the morning of life. How many there are, who spend the bright hours of youth in acquiring knowledge, only to forget it when it is most needed. It is sad enough that any should be obliged, from want of time, to forego their studies as soon as they leave the schoolroom; yet there are thousands who do so needlessly. I would not be understood as confounding mere book-learning with education; but if books can be of any service to us, let us thankfully accept their aid in seeking the treasures of wisdom, and in passing from "glory to glory," even as He who gave us our mental powers, so evidently intended.

Marlboro', Mass., June, 1869. MATTIE.

PLUGGING THE HOLES OF APPLE TREE BORERS.

The letter from Mr. Hersey of Hingham, Mass., in the FARMER of May 22, giving a minute description of the apple tree borer, is as interesting as it is instructive. As is suggested in the editorial note to that communication, I think Mr. Hersey misapprehends the recommendation of plugging up the holes of the borers to destroy them.

One of my neighbors—Mr. Luther Stanley—while making an examination this spring of one of his trees, found several holes with signs of borers at work. He soon found it too much of a job to follow them with wire or chisel, so he dug around the roots, scraped off the rough bark from roots and trunk and found all the holes. Then he took common putty and plugged them all up perfectly tight. On the third day after doing this he visited the tree, and on removing the putty found, to his surprise, four borers dead, all of which came out with the plugging. By this process he destroyed the borers without cutting the roots or trunk of the tree, which is as injurious as the work of the borer, as I have often found it necessary to cut quite deep in order to reach the rascals. From the irregularity of the direction of their course, I have also found much difficulty in fishing them out with a barbed wire. ZEN.

Springvale, Me., June 5, 1869.

WRITING.—MR. BAKER'S BOOK ON FRUIT CULTURE.

I have been a reader of the NEW ENGLAND FARMER for the last three or four years, and I feel bound to say I find it both interesting and instructive. I have taken great interest in the "Extracts and Replies," and have sometimes felt as though I should like to ask or answer some questions, criticise some articles, make some suggestion, or something of the kind; but when I came to reflect upon the subject, I at once came to the conclusion that I never could write anything readable or sufficiently correct to occupy the columns of a newspaper, so I always gave up the idea of committing my thoughts to paper. But I find in your issue of January 9, some editorial "remarks," very encouraging to me, as they must be to all who have the same delicacy with regard to writing that I have. You say "plant the facts firmly on paper, and leave the office editor and the printers to fix the spelling and syntax." You will please accept the foregoing apology, both as my reasons for not attempting to write before and for troubling you with the present communication.

In the FARMER of December 12, a "subscriber" wants to know "all about fruit culture." In the summer of 1866, I had the same anxiety to know all about fruit culture. About the same time I observed in the columns of the FARMER, under the notices of new books, a work entitled "Practi-

cal and Scientific Fruit Culture," by Charles R. Baker of the Dorchester nurseries. I immediately sent to Boston and procured a copy of this work from the publishers,— Messrs. Lee & Shepard. The connection of Mr. Baker with the Hon. Marshal P. Wilder, of enviable renown for his contributions to American Pomology, in the nursery business and cultivation of fruit, was a sufficient guarantee of the practical knowledge of the author of the subjects upon which his book treats. Mr. Baker also informs us that he has consulted some forty different publications upon the same subject, and condensed and embodied in his work whatever he considered of value and reliable. I think there is no work with which I am acquainted that gives, in detail, the arts of cultivation in every minutiæ equal to this work by Mr. Baker. Any person having a copy of the work referred to, I think, will be able to learn all that can possibly be learned from books, as regards the cultivation of fruit. But as you very justly remark, "it will require practice to succeed."

One word more before I close, How is it that Mr. Baker's book has never been advertised in the FARMER? You see that your simply noticing it under the head of new books procured them at least one customer, and also enabled me to gain the information I desired. I think Mr. Baker, or whoever may be interested pecuniarily in the sale of his book, should at once advertise in the FARMER. A CANADIAN.

Stanstead, P. Q., 1869.

CURRANT WORMS.

I saw a statement a week or two since, in the FARMER, I think, that black currant bushes near other varieties would protect them from these destructive pests—as the writer of the article had bushes so situated, all fresh and fair, while others a little distance away were infested. I hope farmers and gardeners will not at once incur much expense in procuring this protection. I have in my garden black and red currants side by side. The black are now leafless, and I think the red will be in about four days. But the black seem to afford the preferable food. K. K.

Charleston, Vt., June 8, 1869.

SKIM MILK FOR CURRANT WORMS.

Please say to your readers who are troubled with the currant worm that skim milk has proved a sure, swift and simple cure. Apply it with watering-pot or syringe; only be sure you wet all the worms; probably molasses and water would answer as well, or thin glue; but have never tried the two latter, as the milk did not leave any subjects for further experiment. A worm breathes through his skin. Stop the pores and he dies. Milk does it. J. NELSON JACOBS.

Worcester, Mass., June 11, 1869.

LICE ON CATTLE.

Thoroughly anoint the creature with oil or grease; I prefer fish or lamp oil. It is perfectly safe under all circumstances, as even too much will not hurt the creature, only be a waste of the oil. It will kill all the lice, remove the dandruff and dirt from the skin, and put the creature in the best possible condition for gaining.

S. S. TINKHAM.

Brownington, Vt., May 6, 1869.

ANOTHER CURE FOR SCRATCHES.

Among the many cures for this filthy disorder published in the FARMER, I have not seen the following, which I have used many times and always with success. After washing carefully with castile soap suds, and wiping the limb dry with a soft sponge, oil the same with hen's oil. Do this once or twice a day, and always before going out in the wet, and wash with cider brandy and wormwood after returning, to keep from taking cold.

Conway, Mass., 1869. J. D. BOYDEN.

SUGAR FROM A SINGLE TREE.

I have gathered from one maple tree the past sugar season, sixty gallons of very sweet sap, or sufficient to make 16 pounds of sugar. Who has done better? E. N. PHELPS.

Waterbury, Vt., May, 1869.

REMARKS.—The average flow of sap from maple trees is stated at 12 to 24 gallons, by the American Clycopædia. But much larger quantities are often obtained. Believing that the value neither of the wood nor the sap of the noble Rock Maple of New England is fully appreciated, we hope the above will call out other statements to the credit of the *Acer Saccharinum*.

TAPPING MAPLE TREES.

From my experience I believe that as much sap is obtained by the use of a half-inch as an inch bit, and I am sure a small hole heals over sooner and injures a tree less than a larger one. But I do not think that as much sap will flow from shallow as from deep boring. SUGAR MAKER.

Grantham, N. H., April 22, 1869.

WORMS IN HORSES.

To remove worms or bots in horses, I give half a pint of whale or lard oil, and repeat the dose after three days. I have never known it to fail, and the medicine will not hurt any horse or colt.

A NEW SUBSCRIBER.

Lancaster, Mass., May 3, 1869.

SORE TEATS IN COWS.—FEEDING CALVES.

Please say, on the authority of one who has tried both, that common West India molasses well rubbed in after milking is excellent for cows with sore teats, and that a few boiled potatoes put into the milk for calves that are to be raised will prove beneficial to their health and growth.

MRS. M. A. LAKIN.

Milford, Mass., May 29, 1869.

ROSE-BUG TRAP.—In printing the little article in the FARMER of May 8, by Mr. P. B. Follansbee, on "Rose Bugs," the punctuation and wording failed to do justice to his idea or plan. Scattered among his four or five hundred grape vines, he has planted some twenty rose bushes for the sole purpose of trapping the bug, whose preference for the rose is indicated by its name. On these roses the bugs cluster, often in great numbers, and both roses and bugs can be readily picked early in the morning into a pail of water, and in this way the grapes are protected with little labor, and in a few years nearly all the rose bugs may be exterminated.

STEAM CULTURE---DEEP PLOUGHING.

JUST about two years ago the Royal Agricultural Society of England appointed three committees to visit different sections of country, where steam culture had been introduced. These committees attended to their duty in September of that year, and subsequently reported to the Society. The reports contain many facts of great interest.

But we wish to call attention at this time to the one great fact, that by the steam plough the soil is worked much deeper than is possible by animal power, and it was the uniform testimony that by deepening the soil, larger crops were obtained and of better quality.

Some American cultivators within two or three years past have objected to deep ploughing, and declared that nothing is gained by it. But the experience of English farmers has led them to the conclusion that the bulk of the crops, whether of grain or grass, is much increased by it, and this is our own conviction, especially when the subsoil consists of clay or clay loams. Deep ploughing has a similar effect to draining; that is, it enables the surface water to settle into the soil more rapidly below the roots of plants. It makes a deeper seed bed for plants in a dry time, and enables the roots at all times to reach the minerals in the soil, that have accumulated there. The recent objections that have been made against deep ploughing, are, we take it, a reaction against the idea that deep ploughing was to be a remedy for all the wants of the soil, which was so strongly urged a few years ago. That was the other extreme. We propose to make some brief extracts from the Reports above referred to.

Mr. Allen ploughed in July and August 323 acres, at the rate of eight acres per day, from eight to twelve inches deep.

Mr. Harvey, in a day of ten hours, ploughs from eight to ten acres; wheat stubble, fifteen inches deep.

Mr. Wallis says his experience shows that not only is the yield of wheat increased about four bushels per acre, but its quality is improved, and its market value increased.

Mr. Ruston is enabled to turn up deep subsoil to the depth of fifteen to eighteen inches. He claims greatly increased yields. He says he obtained one-fourth more an acre of barley and wheat.

Mr. Smythe says steam enables him to get crops where before he had to fallow one season. By deepening his soil he gets increased crops, better quality and crops a greater breadth.

Mr. J. T. Edwards, on his 300 acres of arable land, used to plough four inches, now by steam, ploughs from seven to nine inches. The land is warmer, dryer, and the crops larger and finer.

Mr. Sowerby's farm of 650 acres used to require a pair of stout horses to plough four or five inches. Now the drainage is better, the soil permanently improved, and a decided increase of crops.

Mr. I. W. Edmunds occupies 1000 acres of arable, and 200 of pasture land, in fields of ten to thirty-five acres. Uses Fowler's fourteen-horse power, four-furrow plough, and six-tine cultivator. The advantages are, improved drainage, cheaper tillage, seasonable performance of the operations, and increased yields.

Experience of five years has convinced the Duke of Marlboro' and his agent, Mr. Napier, on his farm of 750 acres of arable, and 1600 grass and pasture land, of the great utility and profit of steam culture.

Mr. William Lavender, on a farm of 550 acres strong clay and loam, clay subsoil, and always wet till the application of deep steam ploughing, says that this deep ploughing makes the driest ground and the largest yield.

Mr. Watt occupies 570 acres arable and 400 grass land. Deep and seasonable ploughing does away with the necessity of fallows, and the usual four-course rotation is changed to a five-course.

A committee in one of the reports say, we found clay fields lying in splendid condition for wheat, with a broken-up staple of nearly a foot deep, which is about twice the depth at which it was worked under the former regimen of four-horse ploughing.

Mr. Smith of Woolston gives the results of his four years' experience thus: Cost of ploughing per acre for four years, from ten to twelve inches deep, £2. 1*s*. under steam ploughing. Cost under horse power, five inches deep, £3. 10*s*. The total produce of four years under horse culture, eighty-five bushels wheat and beans; under steam culture, whole

produce for four years, 140 bushels wheat and beans; increased produce nearly fourteen bushels a year.

The Committees visited 135 farms where the steam plough had been more or less used. In all cases the depth of cultivation had been nearly or quite doubled, and the general conclusion was that the crops were greatly increased, and the cultivation was much cleaner and better than under the more shallow ploughing of horses.

Several important points are brought out in these Reports, but the effect of deeper cultivation is sufficient for our consideration at one time. The amount of wheat per acre, under English cultivation, is constantly increasing, while in this country it is steadily diminishing. This subject is arresting the attention of the wheat raisers on the prairies, and they are wisely coming to the conclusion that the first thing to be attempted is a deeper cultivation of the soil. If they can find in the earth itself the means of enriching the surface, they can continue for a time to raise their own bread, perhaps until a more compact population and a better system of stock raising and keeping shall enable them to return to the soil the manurial substances required to preserve its fertility.

CLASSIFICATION OF IMPORTED WOOL.

The decision of Secretary McCulloch, in relation to the classification of a certain lot of East India wool, made last February, has excited alarms in the minds of many farmers, and led to remarks by editors and correspondents of agricultural papers which, it has appeared to us, the facts have not fully justified. In their haste and alarm, some have spoken of this decision as proving the wool tariff "a humbug and a snare," as "putting a damper on all our fond hopes, and settling the question as to any benefit we are ever to receive from this tariff." Others have made it the occasion of personal abuse of those who acted on the committee appointed by the wool growers to represent their interests in the commission which framed the law.

In an article in the *Rural New Yorker* of June 12, Dr. Randall says:—

The decision, stretched to the furthest limit, does not embrace any extensive amount of wool which can find a profitable sale in our markets. Our greatly disturbed friend who signs himself "An Ohio Wool Grower," is informed that the decision includes no "Australian wools," no "Cape wools," no wools of Merino blood, "immediate or remote," from any part of the earth—in short, no wools whatever but "native East India [Hindostan] wools of unmixed blood." It no more "overthrows the wool tariff" than the detachment of two or three bricks overthrows a solid edifice.

The article from which this paragraph is taken is accompanied by a lengthy correspondence between the President of the American Wool Growers' Association and the Assistant Secretary of the Treasury, in relation to Mr. McCulloch's decision, in which we see no evidence that Secretary Boutwell has confirmed that decision, nor that he has reversed it.

Dr. Randall complains, and we think with justice, that in making this decision, the wool growers' committee, who had a hand in making the law, were not consulted in relation to its construction.

The Assistant Secretary of the Treasury, Mr. J. F. Hartley, submitted Dr. Randall's objections to this decision to Mr. Geo. W. Bond. In his reply, addressed to Mr. Hartley, Mr. Bond justifies the decision, and says:—

I sent to the Custom House and obtained the sample of Mr. Heye's wool, and compared it anew with each of the No. 84 samples in the three cabinets still in my possession. I found that each of them contained wool more than one-half of which was equal to Mr. Heye's, a small portion finer and a small portion coarser, and I therefore declare that the wool was properly classed as No. 3 by that sample. I submitted these samples to Mr. Daniel Staniford, than whom no one in this city holds a higher position as a wool broker, to Mr. Anderson, an experienced wool manufacturer of Lowell, and to Mr. Allen Cameron, a very intelligent manufacturer of Graniteville, all of whom concur with me in opinion and will be ready to give a certificate to that effect if desired. Mr. Baush, the Appraiser at New York, an excellent judge of wool, I am aware did not think sample 84 represented Mr. Heye's wool. This, I think, was owing to the fact that the coarse part of that sample in his cabinet happened to be at the mouth of the cylinder. It was so when he called my attention to it.

Does this look as though even Mr. Bond regarded *blood* as the exclusive principle of classification? Here he refers to the character of the *samples*, and not to race or "blood," as the standard.

Mr. Bond, as will be seen by the above extract from his letter to the Secretary, consulted a wool broker and two manufacturers. Dr. Randall states the claim of wool growers to a voice in the matter in the following modest terms:—

Inasmuch as the facts (the relative qualities of wools) on which rests the propriety of the proposed change in the classification of Angora wools—and of all other wools which Mr. Bond or others may attempt to get transferred from Class 1 to Class 3

—do not admit of practical demonstration, I respectfully solicit that before such changes are ordered by the Department, a hearing may be given to experts who represent different interests—to the friends as well as the enemies of the wool tariff. This course was adopted by the Department in the analogous case of adopting the standard samples. And the wool growers' and manufacturers' committees, on that occasion, objected to all the selected samples of one particular number or variety, and caused others to be substituted; and this occurred in the case of a most important variety, because, as Mr. Bond himself stated, it more nearly than any other variety in the cabinets *touched the dividing line between carpet and clothing wools.* Some other partial and minor changes were also made. To the propriety of all these alterations Mr. Bond assented—thus practically acquiescing in the view that the opinions of a body thus constituted are entitled to more confidence than the opinions of a single side or single individual.

If this claim is manfully insisted on by the wool growers of the United States, we have little doubt that Secretary Boutwell will grant them or their representatives, as well as brokers and manufacturers, an opportunity to be heard on questions which so directly affect their interests.

BLACK ANTS.

A good housekeeper near by is constantly annoyed with "black ants" in her pantry. They infest the sugar box and cake jar, and are a source of trouble wherever found. Can you prescribe a "good riddance" for them, and much oblige a constant reader of the FARMER. JAMES FOOT.

Pittsfield, Mass., June 2, 1869.

REMARKS.—There are about as many ways to get rid of the black ants as there are to get rid of the "shakes" in a fever and ague neighborhood. We will name a few, and you may take your choice for experiment. 1. Procure a large sponge wash it clean and press it dry. This will leave the cells open. Then sprinkle fine white sugar into it and place it where the ants congregate. They will collect in the sponge. Then dip it into scalding water and thus destroy the ants. But as hot water injures the sponge, its immersion in cold water may answer. Repeat the process till the pantry is cleared. 2. Take about a spoonful of common painter's red lead and mix with molasses enough to make a thin paste. This will catch some and disperse the balance. 3. Fill one or more common tea cups half full of sweetened water, place them on the shelves, and large numbers of the ants will tumble in and be drowned. 4. Ants are very fond of walnuts. Remove the sugar, &c., temporarily from the pantry, and put a quantity of walnuts or shellbark nuts on plates and put them in the closet. The ants will soon collect in myriads on the plates, then turn nuts and ants into the fire, and repeat as long as they collect on the nuts, then put powdered camphor into their holes and crevices, and they will all disappear. 5. Spread thick molasses on a piece of brown paper, then sprinkle on a little arsenic, and place it in the way of the ants. Cobalt and molasses are also sometimes used. But if you do not succeed in driving them away, you can make a low stool for your sugar barrel or tub, with each leg in an old blacking box or other cup or dish partly filled with tar or oil, keeping the tub or barrel a little distance from the sides of the pantry. But, after all, there is this consolation about the black ants, they are not half as bad as the little red ones, which we believe are never seen where the black ones abound. As affording a hint to those who are fighting ants, the following remarks on their intelligence and habits by B. Jaeger, in his "North American Insects," may be of interest.

"If one ant discovers a closet where are sweet articles, such as fruit or sugar, it quickly returns to its fellows for the purpose of acquainting them of its discovery, and in a very short time whole swarms of them will arrive with the discoverer to divide the spoils. They go out in companies, also, to drink, of which they are very fond; but if one of them is disturbed in so doing he communicates the fact immediately to all the rest by pushing the one nearest him, who passes on the news in the same way to all the rest, when all receiving the sign run to the hill; but if any one is not attentive to such admonition, he is seized by the legs and dragged to the hill. In general, they give signs to one another in all their operations by their angular or elbowed antennæ, which work somewhat like the old French telegraph. With their antennæ they also express their friendship and love, as we may see when we observe them caressing one another, or their friends the plant-lice."

While combating what we regard as pests, we cannot but admire, not only the industry of the ant, which is commended as an example to the sluggard by Solomon, but the wonderful instinct manifested by some species. Dr. Lincecum, as quoted in "Homes without Hands," gives the following account of a large brownish ant found in Texas, which he calls the AGRICULTURAL ANT.

"When it has selected a situation for its habitation, if on ordinary dry ground, it bores a hole, around which it raises the surface three and sometimes six inches, forming a low circular mound, having a very gentle inclination from the centre to the outer border, which on an average is three or four feet from the entrance. Around the mound, the ant clears the ground of all obstructions, and levels and smooths the surface to the distance of three or four feet from the gate of the city, giving the space the appearance of a handsome pavement, as it really is.

"Within this paved area not a blade of any green thing is allowed to grow, except a single species of grain-bearing grass. Having planted this crop in a circle around, and two or three feet from the centre of the mound, the insect tends and cultivates it with constant care, cutting away all other grasses and weeds that may spring up among it, and all around outside the farm-circle to the

extent of one or two feet more. The cultivated grass grows luxuriantly, and produces a heavy crop of small, white, flinty seeds, which under the microscope, very closely resemble ordinary rice. When ripe it is carefully harvested, and carried by the workers, chaff and all, into the granary cells, where it is divested of the chaff and packed away. The chaff is taken out and thrown beyond the limits of the paved area.

"During protracted wet weather, it sometimes happens that the provision-stores become damp, and are liable to sprout and spoil. In this case, on the first fine day, the ants bring out the damp and damaged grain, and expose it to the sun till it is dry, when they carry it back and pack away all the sound seeds, leaving those that had sprouted to waste."

Effect of Exposure on Coal.—Prof. Rockwell, in the American *Journal of Mining*, calls attention to the deterioration which coal suffers from exposure to the weather, and to the importance of keeping it as dry as possible. Anthracite suffers the least. According to the experiments of Grundman in Germany, coal exposed to the weather in heaps, lost in a period of nine months, fifty per cent. of its value as fuel, and about as much as a gas-making material. It undergoes a slow combustion, taking up oxygen, and giving off the volatile products of oxidation,—air and moisture playing the principal part, and warmth promoting it.

For the New England Farmer.

HOW SHALL WE IMPROVE OUR FARMS?---NO. 2.

On the thirty acres of worn out land mentioned in a former article, (Weekly Jan. 23, Monthly page 120,) was one field of ten acres which had been about half seeded two years before, and gave but little feed, and, in order to know whether land could be brought to a good state of fertility by keeping stock on it exclusively, I determined to test it on this piece; it being, like the other, remote from the barns and difficult to get manure on to.

On one end of the piece was a small hay barn, and I made some sheds for shelter. I then divided the field in the middle by a fence. On one-half of it I turned twenty sheep after the feed had started so that they could live. On the other half I sowed, early in the spring, thirty pounds of clover seed, and one bushel of timothy seed and kept it for meadow.

The first half, or pasture, kept the sheep through the summer and fall, it being a favorable season for feed, but the sheep went into the winter pretty thin. From the other half, or meadow, cut 2¾ tons of hay which, with seven bushels of oats, kept the sheep through the winter, but they were not kept as well as they should have been.

The account the first year stood as follows:

Ten Acre Field.	Dr.	
20 sheep, cost	$30.00	
Grass or hay seed	7.30	
Cutting hay, washing, shearing and care of sheep	40.00	
7 bushels of oats	3.00	
Total expense first year		$80.30
	Cr.	
90 pounds of wool at 52c per pound		$46.80
Leaving the ten acres in debt		$33.50

The sheep were two years old and had no lambs.

The second year put the sheep back in the same pasture and spread the manure on the meadow, and during the latter part of April sowed one ton of plaster of Paris on meadow and pasture. Raised fourteen lambs this year and kept them all in the pasture until fodderring time. For this year the account stood as follows:—

Ten Acre Field.	Dr.	
To total expense, labor, care, &c.		$60.90
	Cr.	
112 pounds of wool at 45c	$50.40	
14 lambs	17.50	
		$67.90
Balance in favor of land the second year		$7.00

Deducting this from the balance of the first year, and it appears that the land was indebted, at the end of the second year, $26.40, but I had about one ton of hay which lay over.

The third year put in the old sheep and five of the lambs, making twenty-five. Managed the same this year as last, using the plaster on both as before. and the total cost including the price of the five lambs, and the amount back on last year $104.65. Income from wool, lambs—of which there was seventeen,—and two tons of hay fed to other stock, $122.50, which brings the balance the other way by $17.85.

The fourth year put the sheep in the meadow, forty-two in number, and used $7.00 worth of hayseed and one-half ton of plaster on the old pasture, all the manure made the past winter, and sowed one-half ton of plaster on the other piece. Total cost this year $138.50, charging the seventeen lambs, and $28.00 worth of grain fed to get them through the winter. Income 251 pounds of wool at seventy cents per pound, $175.70; sixteen lambs at $2 per head, $32.00, together with balance of $17.85 from last year, makes $225 55. Deduct expense, $138.50, leaves $87.05 to the credit of the ten acre lot.

The fifth year put in fifty sheep and managed precisely as the previous year, at a total cost of $147.00 and an income of $335.00, the wool bringing this year $1.00 per pound. The land then being $275.00 ahead.

The sixth year left the lot $402.00 ahead.

The original cost with interest for six years at seven per cent was $282.00, taxes, $35.00. Total cost and expenses $217.00.

Therefore, the land has paid for itself, interest, taxes and all other expenses, and $85 over, with sixty-six sheep on hand, worth $132.00, which makes $217.00 for profit, and

the land is worth double what it was at the start, independent of the rise on land.

From this I conclude that land can be enriched by keeping sheep on it exclusively.

Now the question arises, is it practicable to apply this method to the whole farm? Unless the owner has capital sufficient to carry on the farm for four or five years and to subsist upon, it is hardly so; but the man that has this capital can enrich his farm in this manner as cheaply as in any other way, and it will be a very lasting improvement, as land once made fertile in this manner, will bear a vast amount of cropping afterwards, if reasonably taken care of. The low price of sheep and wool at present would probably affect the result somewhat; but it is reasonable to expect both to command better prices within two or three years.

Still I would advise those intending to improve their land by keeping stock, to keep some of all kinds; that is, some sheep and some cattle. Every farmer must have, in the first place a team; next, cows enough to supply his family with milk, butter, cheese, &c. Then let him make up the rest as he likes, more cows or more sheep.

One thing he must do if he would enrich his land in this way, and that is, keep all the stock that the farm will carry through the summer and winter, and do it in good condition.

Plough only just enough to raise what you consume on the farm, and raise that on just as little land as possible with high culture and high manuring. Make all the manure possible, by mixing muck, if to be had, with the animal manure, and saving all refuse and leaves, bones and everything that can be turned into manure, and put it on the land to make more grass, hay, &c., which will enable you to keep more stock, which will make more manure. In this way these old worn out farms, of which there are so many, may be brought to their former state of fertility. And, as old preacher Dow used to say, *so mote it be!* J.

Oak Hill, N. Y., 1869.

REMARKS.—The thirty acres alluded to in the first paragraph of this article were improved, as will be remembered by most of our readers, by ploughing in clover with plaster. In this case a like improvement by keeping sheep is detailed. Both experiments were made by a practical farmer, who at first objected to giving us a statement of them, because he was not accustomed to writing, and because they were only such experiments as any body could make, and which he should fear would hardly be worth printing. We hope his success in improving his "worn-out" fields will encourage other farmers who have similar lands, to follow his example.

For the New England Farmer.

EXPERIMENTS IN CUTTING GRASS EARLY.

For several years past I have cut my hay earlier than most of my neighbors. I have had so much said to me by some of them against early cutting that I have sometimes felt that I was experimenting, and perhaps I was wrong and they right. When I was a boy, I remember we generally commenced haying the first Monday after the "Fourth," and finished our English by the first of August, if the weather and every thing else were favorable. If the weather proved unfavorable, we had to finish sometime in August.

Last year I intended to *experiment*. I commenced cutting twenty-five acres of English early enough to have it all *done* by the fourth of July.

I cut my orchard grass first, I think about the middle of June. The weather was wet, or I should have cut it a week earlier. As it was, it was overripe, and the cattle refused to eat it up clean. This is the earliest grass I have, and may be cut by the fifth to the tenth of June every year, or ten days before clover.

I next cut my best grass, on land where I expected to cut a second crop. This was clover and timothy.

I cut the redtop last, on fields that had partly run out, and would not cut but one crop. All but one acre was cut by the fourth of July. That acre was left as an experiment, till the third week in July. When cut, it was so much older than what I had cut earlier, that the stems were hard and stiff, and when it was put up in cocks it did really look as though the crop was twice as large as if it had been cut in June. And it made a large bulky load, but we all noticed that we did not have to lift very hard to put up a large forkful; whereas, of that cut in June, we did notice that a small forkful made a heavy lift. And the difference was noticed all through the winter.

The mows and scaffolds of hay *held out* as they never did before. Visitors remarked that the hay in the barn seemed like *pressed* hay, it was so solid in the mows. It was fed to milch cows and young stock. Very little grain was needed to keep them all in excellent condition. I fed some grain for the sake of a variety.

I shall not cut early this year as an experiment, but because I am fully satisfied that an acre of grass is worth more, cut as soon as it is in blossom, or even a little before, than it will be any time afterwards; although it will sometimes thicken up at the bottom. But the main part of the crop is growing poorer every day after it is in full bloom.

A. W. CHEEVER.

Sheldonville, Mass., June 6, 1869.

—A California wool circular estimates the next clip of that State at 18,000,000 pounds.

AMONG THE FARMS.

Planting — Highways — Crop prospects — Potatoes — This season and last — Pastures — The grass crop — Value of clover.

OUR own planting being finished, we improved the occasion by enjoying the luxury for a few days of looking at some of the farms, and conversing with some of the farmers, scattered over a space of about a hundred miles, in the direction of our route.

Where the roads were repaired in April we found them smooth, hard, and pleasant to drive the team over. Occasionally, however, parties of men, with implements and oxen were ploughing up the turf and fine sand or loam which had been washed from the bed of the road, and throwing it back to the places where it had been probably thrown twenty times before! Thus, in a sweltering hot day in June, when the young crops demand the farmer's care, these men were making the roads in worse condition than they were in before they commenced upon them. In some instances the earth was drawn on to the road with a scraper, and in others shovelled on, lumps and sods included, where it was suffered to remain very much in the condition in which it was dropped there. Where the stones were numerous, and too large, the workmen sometimes condescended to throw out the thickest of them on to the side of the road, where they could *enjoy the pleasure of ploughing them back again during some hot day next June!*

The roads left in this condition—and there were many patches of them—are truly execrable. Trotting a horse over them, even in a light buggy, was out of the question. The direst punishment we could wish such road destructives, would be to ride over their own works until they should learn that there is a night and a wrong way to repair a road, so that when they labored again, it should be in the right way. We sincerely believe that ten dollars, judiciously expended on those roads in the month of April, would accomplish more good than twenty-five dollars would in the month of June. Some of the places which had been worked over within a few days, were mere beds of shifting sand, or, if in low places, were cut into deep ruts and holes, and the earth sun-baked, so that the road-bed was about as comfortable to ride over as a road would be covered with bricks dumped down miscellaneously upon it. When will men learn wisdom and cease to sin against light and knowledge. It was not only vexatious but sad, to see so much labor misdirected, and so much discomfort follow from it. The fresh air from the hills, and the nodding blossoms by the wayside, were only partial compensations for all this waste of human toil.

Generally, the crop prospects are good. Nearly all seeds committed to the ground came quickly, in good color and strength. The corn is an entire week beyond its condition at the same period last year. Winter grains are stout and forward. Barley and oats have set finely, and promise large returns. Potatoes look well. A great change has taken place in regard to the time of planting them. In all the region about cities or manufactories,—anywhere, where a home market is found, *early* potatoes,—that is, potatoes that are fit for the table in July and early August, may be sold in almost any quantity. This stimulates the farmer to get in the seed as early in April as the ground will permit. He finds it a profitable crop, and is enabled to harvest it in season to get a crop of turnips from the same soil, or to lay it down to grass for future years. By this course, the returns are quick and the profits fair.

All small seeds have come remarkably well this season; beet, carrot, onion, parsnip, celery, egg plant, and other seeds in the garden, never came better. The small field seeds, also, mangold, rutabaga and beets have come quick and strong.

The *pastures* all along the way seemed unusually rich this season. We do not believe the fresh flowers, the singing birds, or the music of the brooks, beguiled us into an unusual harmony with the nature about us. It was not that. If it had been, the execrable roads we were obliged occasionally to pass, would have neutralized and dissipated it all. The impression on the mind of our young and intelligent companion harmonized with our own. He saw the new and promising life all about us in the same glowing light. The pastures were rich and plentiful in their verdure,

and their sleek and contented occupants verified our conclusions.

Such was not the case, singularly enough, with a large proportion of the mowing fields. They certainly did not come up to their usual estate in the middle of June. What can be the cause of this? Is it not an anomaly, that when the *pastures* are fresh and luxuriant, the *mowing* fields should look scanty and unpromising? Everywhere, the remark was make by observing persons, that the grass crop would be light. Was it *winter killed?* If so, it was in some general and unusual way, for we saw very few bare patches, such as usually occur in slight depressions in the field where ice was formed, and winter-killing succeeded. The injury seems to be minute, occuring over a whole field, giving the grass a sparse and weakly appearance. Was it the open winter, sweeping winds, or extreme cold? It is a case *sui generis*, unique, peculiar of its kind. Will the *savants* of the agricultural college enlighten us? This is our principal New England crop. We must not let it decrease. If the South has been awakened to its interests, and is cultivating the grass crop, so that its demand upon us will be less than usual, we must feed more good hay to our stock, and let the meadow hay go to cover strawberry plants, pack crockery with, or preserve another valuable New England crop—the ice. We must increase the crops of timothy, red-top, orchard grass, and, especially, the amount of clover, so that we shall not only see the

"Flocks thick nibbling through the *clovered* vale,"

but find our barns stored with it for winter use. It probably makes the most valuable dry fodder we have, both for horses and cattle. The objection to cultivating it in larger quantity, has been in the difficulty of properly curing it. With the use of hay caps, however, and other facilities for securing hay, that difficulty will vanish before enterprising farmers. Those persons who are raising milk for market, will find it greatly to their account to harvest a large portion of their fodder in clover. No other long fodder will produce milk like it, and none is so grateful to the appetite of neat stock.

In Flanders, clover is deemed indispensable to profitable farming; and they know there what good farming is. Upon its cultivation hinges apparently the whole of the farmer's prosperity. Without clover, no man there would pretend to call himself a farmer.

In Great Britain, clovers are considered alike indispensable to good farming. Where clover and plaster have been most freely used in our country, the greatest degree of agricultural improvement has taken place. Several counties in Pennsylvania have doubled their agricultural products and profits since the introduction of clover and gypsum.

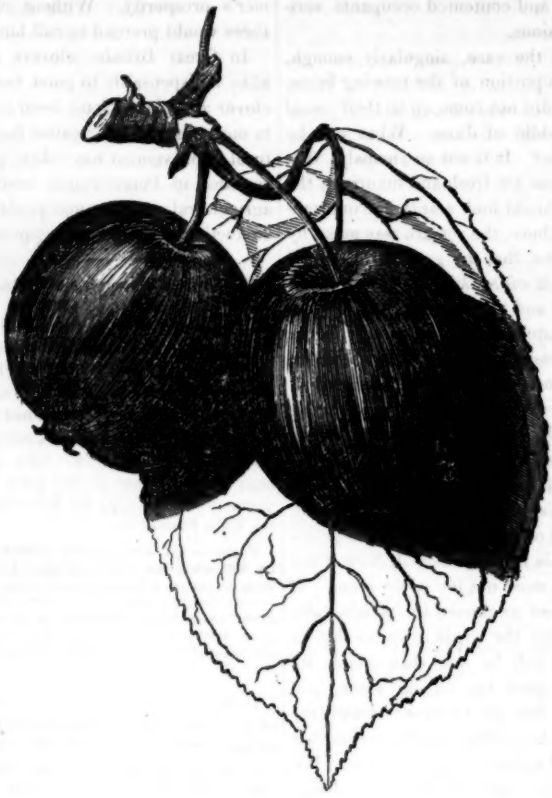
Caution against Cutting Grass too Early. —The way that some folks put in practice the recommendations of particular things, or of particular ways of doing things, is often illustrated by the story of the old Indian, who having heard that feathers made a soft bed, laid a single one on a rock and slept on it, and then complained that it was the hardest bed he ever saw. So, lest any one should understand that what we have said in favor of early haying means to cut grass before it is two-thirds grown, we copy the following caution from the *Ohio Farmer*:—

Farmers are not usually fooled more than once by following the advice of unskilled but would-be wise advisers, who advocate cutting grass before it is two-thirds grown, but many of them meet with great losses year after year by not being in readiness when the proper time for cutting comes, and allowing the crop to get too old and ripe.

How to Learn.—At a recent evening meeting of the members of the Legislature of New Hampshire interested in farming, Mr. Joseph B. Walker of Concord, in response to the call of the chairman to explain how he raised the best corn in the State, made some observations on ploughing, manuring, &c., closing with the remark, "for myself, I have learned more by my blunders than in any other way."

We commend this remark to those of our correspondents who sometimes say, when speaking of some incomplete experiment, "if it succeeds well, if I have a good crop, or if it turns out as I expect, I will report the result for the benefit of others." Blunders and failures are, in fact, as Mr. Walker says, even more efficient educators than successes, and should be as fully and minutely reported.

—For tender mouth in horses, a correspondent of the *Country Gentleman* has been successful in using a chain nose piece. He says, "put a short piece of small chain in front of the horse's nose; fasten to the head-stall by running through the rings at the lower end of the check-pieces. Attach your line to the chain, and you are ready for a start. After a day or two remove the *bit*, and grease your horse's mouth and it will soon be well. I used a horse two months without a bit, both single and double, and found no trouble in guiding him."



CRAB APPLES.

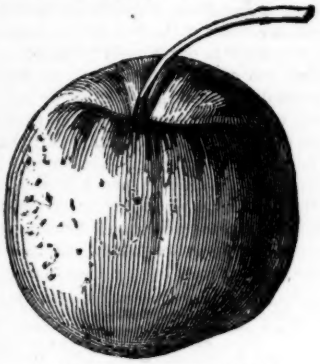
Our interest in this fruit was much increased by the display of Crab Apples at the Fair of the Vermont State Agricultural Society last fall, which included one hundred and five varieties from the garden of the Misses Shipman, near Burlington. It is with pleasure that we notice a series of articles in the *Rural New Yorker*, written by F. R. Elliott of Ohio, a distinguished pomologist, on the cultivation of this fruit, with suggestions for the production of new varieties by hybridization, &c. The failures that have attended the introduction of the choice varieties of our common apples into the Northwestern States and Territories have been so numerous that many have come to the conclusion that this section is not adapted to the growth of any but small fruits, such as currants, gooseberries, &c.

Mr. Elliott believes, however, that some varieties of apples may be grown wherever corn will ripen. Indeed, he says that "during the past few years the exhibition tables of horticultural societies in those sections have been supplied with a new class of apples, which, while they have not the size of a large proportion of the old varieties of the *Pyrus malus*, possess richness of flesh, and eatable quality, almost if not quite equalling them; and from the botanical character in tree—the *Pyrus baccata*—a hardihood that insures success to the planter."

Mr. Elliott gives the following description of the three varieties represented by the cuts, which we borrow from his article already referred to; the first being that of the one at the head of this article:—

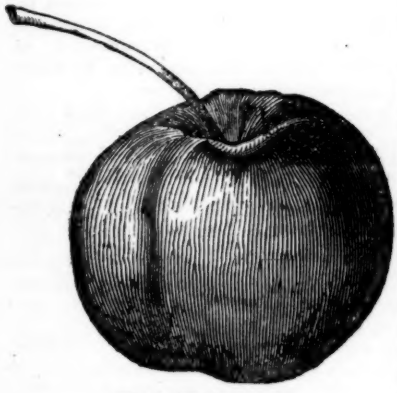
THE TRANSCENDENT.—Fruit, medium to large for its class, roundish oblong, flattened at its ends, slightly but regularly ribbed; golden yellow, with a rich crimson, red cheek in the sun, covered with a delicate white bloom; when fully ripe the red nearly covers the whole

surface. Stem, long and slender, set in an open, deep cavity; calyx closed, with long reflexed segments; flesh, creamy yellow, crisp, sub-acid, a little astringent until fully mellow when it is pleasant and agreeable; seeds, full and abundant; leaf, broad, oval, with an acute point, and narrow, sharp, regular, serratures; season, early Autumn. This is one of the best of early autumn varieties; but while I have had specimens gathered in August, keep until October, I have failed to keep it later, and fruit taken from the tree late in September has failed to keep more than a month.



Hutchinson's Winter Sweet.

Fruit medium size; roundish oblate; light yellow ground, with a blush red cheek in the sun, and many minute dots; stem long, slender, in a deep open cavity; calyx closed, with long pointed segments; basin broad, deep, corrugated; flesh yellowish white; dry, sweet; core large; seeds abundant; season November and December.



Chase's Winter Sweet.

Fruit medium size; roundish oblate; rich, warm, yellow ground, mostly overspread with dark, rich red; minute dots; stem long, slender; cavity broad, open, deep; calyx half closed, with short almost erect segments; basin shallow, corrugated; flesh yellowish, very firm, moderately juicy, mild sweet; core small; seeds plump and abundant; season December.' This, apparently, is a long keeper, and much the best sweet apple among its class.

OUR AGRICULTURAL WRITERS.

Many of our contemporaries take much satisfaction in announcing the names of the various distinguished agricultural writers and speakers who may have engaged to enliven their columns by an occasional contribution. From the character of their pursuits, many persons who have obtained wealth as merchants or manufacturers, or notoriety in politics or the professions, have acquired, at the same time, a facility in speaking and writing which enables them to express their thoughts, and to communicate the facts of their observation, in an agreeable and attractive manner.

On the other hand, men who devote their lives to practical farming,—who work not only for "a living" but for the support of a family,—have little time and less inclination to practice their faculties of communication.

Hence it comes to pass that in the columns of most agricultural papers, as in town meetings, legislative bodies, conventions and assemblages generally, a certain few individuals are expected to "hold forth" on all subjects and at all times. They speak or write, not because they "have something to say," but because they wish, or think they are expected "to say something." Such men are liable to talk and write until people are tired of hearing and reading.

Those who read agricultural papers call for articles written by practical farmers, and it is encouraging to note the steady increase of such articles in most of the papers in the country. The change in this respect has been very great within a few years past. Among the evidences of this change we may mention the fact that during the past year a larger number than ever before of the communications forwarded to this office have been accompanied by a postscript, like that attached to one of the best articles in the present number, in which the writer says, "I never attempted before to write anything to be printed," &c. Such men write because they have something to say, and when they have said it they stop, and give others a chance.

Our own estimation of the value of the communications of writers of this class, we are pleased to find is shared by others, and is expressed by a corespondent of the *Western Rural* as follows:—

Who are our best Agricultural writers? Are they men that gain their knowledge of farming from

books and papers only? Nay, verily. They are experienced farmers. They are men whose hands are hardened by hard labor. They are men who have selected rich land, paid for it, and have brought it into a state of cultivation by years of incessant toil. They are men who are experimentally taught the knowledge of farming they impart to us on paper. They are men who select and cultivate the choicest qualities of farm produce. They are men who select the choicest varieties of fruit trees; and by their own labor, they are trained and pruned. In short, they are men who are acquainted with all the branches of farming; and it is such men only that can produce sound discussions on agriculture.

NEW PUBLICATIONS.

NEW AMERICAN FARM BOOK. Originally by R. L. Allen, Author of "Diseases of Domestic Animals," and formerly editor of the "American Agriculturist." Revised and enlarged by Lewis F. Allen, Author of "American Cattle," Editor of the "American Shorthorn Herd Book. New York: Orange Judd & Co. 1869. Boston: Nichols & Hall. 529 pages. Price $2.50.

This volume treats of soils and their cultivation, of manures and their composition, of grasses, grains, fruit, farm buildings, animals, &c. Though written in the form of a treatise, and not arranged alphabetically, it is in fact an encyclopædia of agriculture, and by means of its full index may be consulted as such, in the every day operations of the farm. The original work was published twenty-three years ago, and has been widely circulated. The editor of the present edition is so well known to farmers as to need no introduction or endorsement by us. We may, however, say that he has made a *new* book, and one that we think will please farmers. It treats of general principles, and not, like too many of our modern agricultural publications, of the good points of the herds of particular breeders, or the implements of particular manufacturers. We do not see any indications of axe-grinding in this volume. We wish we might close our notices of all agricultural books with the same remark.

THREE SEASONS IN EUROPEAN VINEYARDS: Treating of Vine Culture; Vine Disease and its Cure; Wine-making and Wines, red and white; Wine drinking as affecting Health and Morals. By William J. Flagg. With a Manual for the Sulphuring of Diseased Vines. New York: Harper & Brothers. Boston: A. Williams & Co. 1869. Price $1.50. 332 pages.

Though written in a chatty style, the author informs us that his "chief aim has been to convey information, both practical and theoretical bearing on the important matter of wine-growing in America." He gives the following as a summary of the results of his observation of the practice of European vineyardists:—long pruning is injurious; drainage is necessary; plains are preferred to hills; preference is given to low training without supports; red are better than white wines; sulphur may be relied on as a cure for all vine diseases; each variety of vine needs a different culture for each different soil, and again for each different climate.

In relation to the use of wine, it is assumed that "the American people are in want of a drink." "A nation has transplanted itself, but not its vines, from one hemisphere to another, and is thirsty." Our present American wines are characterized as "a diluted alcohol flavored with grape acid, and sometimes, too, colored with grape skins." These it is admitted will not promote temperance; still it is insisted that when we learn to produce "good, pure, wholesome wines at a cost of ten cents a gallon" drunkenness will disappear. Others who have visited wine countries and who have seen perhaps as much of "wine bibbers" as the author of this book, arrive at very different conclusions as to the probable result of the free use of wines by a people who dwell in our "thirsty" climate.

The book has an index, for which the author makes a handsome apology. As we do not remember of ever having seen anything of the kind before, we copy it. "Inasmuch," says Mr. Flagg, "as the information conveyed in the volume has of necessity got interwoven and somewhat entangled throughout the whole texture of the narrative, and might consequently be difficult to refer to, I have added an index, which will help the reader to search out what he may need to find."

THE PRACTICAL POULTRY KEEPER. A complete and standard guide to the management of Poultry, whether for domestic use, the markets or exhibition. By L. Wright. Third edition. New York: O. Judd & Co. Boston: A. Williams & Co. 1869. Price $2. 244 pages. Illustrated.

This is an English work, and Johnny Bull's positiveness confronts us even on the title-page,—"A Standard Guide;" to which the preface adds, "authoritative." If the author's estimate of the profit of keeping fowls on a large scale is "authoritative" and a "standard guide," those who have faith in mammoth heneries will find aid and comfort in this volume. On pages 240 and 241—please remember the pages, as the book has no index to facilitate reference—we find his estimates for an establishment of ten thousand fowls. He figures the necessary capital as follows:—

10,000 fowls, at 50c each	$5000
Buildings, Fittings, Engine, Plant and Utensils, including two horses and carts	6750
One month's food	750
Spare cash working capital	2500
Say total capital	$15,000

His estimate of expenses aside from food, for the fowls, is as follows:—

Rent—100 acres, at $10	$1000
Taxes	200
Interest on capital of $15,000 at 5 per cent	750
Wages—2 men with their families	1000
Horse keep	300
Fuel and attendance for engine	500
Annual Expense	$3750

He does not give the items of the income, nor of the food consumed, but assumes that "we are justified in reckoning every fowl in the yard as representing a gross profit, including manure, over and above her food of 4s ($1) per annum." Therefore,

Gross profit over food from say 9600 hens, at $1 per annum each, is	$9600
Expenses as above	3750
Gross profit one year	$5850

This looks well on paper. It is a good specimen of book farming. But so far as we know, all at-

tempts that have been made to put it in practice have sadly failed.

On reviewing his figures, our author remarks that "if they show a somewhat more moderate return than other writers have promised, they are at least likely to be realized, and, with a good market, offer sound inducements to the enterprising capitalist."

FIVE ACRES TOO MUCH. A truthful elucidation of the attractions of the Country, and a careful consideration of the question of Profit and Loss as involved in amateur Farming, with much valuable Advice and Instruction to those about purchasing Large or Small Places in the rural Districts. By Robert B. Roosevelt, Author of "Game Fish of North America," &c. New York: Harper & Brothers. Boston: A. Williams & Co. 1869. Price $1.50. 296 pages.

This volume is dedicated to the writers of such books as "Ten Acres Enough," and is an extravagant burlesque on their representations, as illustrated by the experience of a city lawyer in an attempt to reduce their advice and directions to practice.

CONNECTICUT STATE BOARD OF AGRICULTURE.—The following officers were elected at a meeting held June 8:—

President.—Governor Marshall Newell, Hartford.

Vice President.—Hon. E. H. Hyde, Strafford.

Executive Committee.—B. B. Plum, Trumbull; James A. Bill, Lyme; H. S. Collins, Collinsville, and Secretary Gould.

For the New England Farmer.

SEASON AND FRUIT IN CHESHIRE CO., N. H.---A NEW INSECT.

After passing one of the most peculiar of winters, we are again enjoying the charms and beauties of spring and summer.

No place on earth is more charming or more enchanting to the lover of nature than the mountains of New England at this season. Here the trees are filled with blossoms and songsters, and the air with fragrance and melody. These little warblers seemed never so plenty as this season; and God seems to have sent the antidote with the poison, for the worms and insects are very numerous, determined and active. Let there be peace on earth and good will toward *birds*, if not among men. We will spare them to go south to winter, as all their music is reserved for the spring and summer, which is the charm of the seasons. How many more martins and swallows we might have about our dwellings, if we would but furnish them with suitable accommodations! They love civilization and the haunts of man, and are one of his greatest friends.

The heavy body of snow of last winter, (which gave us 122 days of uninterrupted sleighing,) preserved the crops and trees from frost, and the prospect for all kinds of crops except the apple, is remarkably good. This season is two weeks earlier than last, and vegetation comes on rapidly. Corn, potatoes, rye, oats and barley all look well at this date. There being but little frost in the ground during the winter, the melting snow readily entered the ground, giving the grass a good start, and the continued rains have brought this crop up to a very promising condition. March being the coldest month of the winter season, the snow was kept on late, which held vegetation in check, and carried us safely past the time for severe late frosts.

The apple blossom is light, but very strong, full and well set. The trees have taken on a very heavy foliage, and are growing rapidly. They are not so likely to hold their fruit, however, as when they take on less foliage. Pears have bloomed very full and are setting well. Louise Bonne de Jersey, Superfin, Bartlett, Glout Morceau, Flemish Beauty, and Sheldon, are right on their pomolgical dignity. I have the Astrachan and Tompkins County King Apples, on dwarf stocks, but the standards bear best at same age. These dwarf trees should not be "set six or seven feet apart," as nurserymen and others recommend; mine require twelve feet at six years old. The King is a powerful grower, of the spread eagle style. The Astrachan is more compact, and makes a splendid tree.

The apple borer comes down on us this spring for a desperate fight, bringing along its natural ally, the canker worm, that the attack may be general and simultaneous.

I send you herewith specimens of these worms, and of the fly which, I think, begets them, for examination. Is it identical with the "canker worm" that does so much damage to the fruit trees in your section? This worm attacks the currant as well as the apple, and occasionally the pear. The Brown Sparrow and little Yellow Bird are diligent hunters of this worm, and should be sacredly spared for this purpose. L. L. PIERCE.

East Jaffrey, N. H., June 5, 1869.

REMARKS.—All but one of the worms enclosed were crushed and destroyed in the mail bags. Insects should always be put into a small stiff box for transportation by mail. Being satisfied that it was not the "Canker Worm," we submitted the specimens to Samuel H. Scudder, Esq., of the Boston Society of Natural History, who has examined them and kindly furnished the following statement:

"EDITOR OF NEW ENGLAND FARMER,—DEAR SIR:—The caterpillars sent by your correspondent are unknown to me, but are allied, not distantly, to the Canker Worm. The remedies, however, which check the ravages of the latter, dependent as they are in great measure upon the wingless condition of the

females, will not necessarily prove effectual when appiled to this species. The moth of this enemy may have as good wings as the male. Until its complete history is known,—and this your correspondent, being in an infected district, ought to furnish to the world,—hand-picking can be used on the currant bushes, and tobacco, soap, &c., applied to the apple trees.

The "fly" which your correspondent thinks "begets" the worm, is as harmless as possible. It is one of the "May-flies," belonging to an entirely different order of insects, and its larva lives in the water. It may be laid down as a rule, to which of course there are exceptions, that the "fly" and the "worm" of the same species will *not* be found at the same time.

I have sent the single living worm which remains, to a gentleman who is especially interested in the group of moths to which it belongs, asking him to raise it. If additional specimens are sent in a pill box, we will try to learn more about them.

Samuel H. Scudder.

Boston, June 8, 1869.

For the New England Farmer.

RAISING CALVES.

In the Weekly Farmer of May 8, Monthly page 294, there is an item upon the subject of raising calves, by Mr. C. F. Lincoln of Woodstock, Vt., in which he gives his method, which, in my opinion, is quite erroneous, and I think will prove a failure in producing first-rate calves.

He says he never allows his calves to suck, not even once. Now, to my mind there are abundant and obvious reasons for differing with Mr. L. in this respect. In the first place, it is more natural for a calf to suck than to drink; consequently the most natural way of obtaining sustenance, is the most thrifty way. Again, I have observed that calves that are allowed to suck even a week, are less liable to be troubled with the scours than those allowed to suck a day or two, or not at all.

Mr. L. experiences less difficulty in learning them to drink, by removing them directly from the cow, and giving them their first milk from a dish. I think a calf will learn to drink quite as soon after sucking a week or two, as otherwise. The trouble, if there be any more than at first, lies in the increased strength of the calf, and the consequent increased difficulty of handling him. But let him get fairly hungry, and in nine cases out of ten, he will drink as readily at the end of one month, as at the end of one day.

I am raising a calf which sucked until eight days old, and on the night of the eighth day I held a dish of milk to his nose, and after getting a taste of it, he drank it as quickly as any calf could, and all the trouble I have since had with him has been to carry the milk to him. All calves are not so ready to drink, I will admit; but give them a fast of twenty-four or thirty-six hours and the most obstinate will generally drink from a trough, or dish of milk, placed where it can put its nose into it, and that without a finger or anything else to suck.

I must differ with friend Lincoln again in regard to his practice of turning young calves to pasture in the spring. My experience and observation induce me to believe that they do better sheltered from the sun until hot weather is over, for in my opinion the exposure to a hot, scorching sun will stunt them quicker than the cold in winter; and, besides, I think green grass unfit for them to eat. A near neighbor of mine has a steer one year old, which girts five feet and one inch, which never stepped upon the ground, and never tasted grass until this spring; and yet he was, at one week old, a small calf; being nothing more than a grade Durham, and did not have extra keeping.

In order to produce good calves, my method would be to keep them housed the first year, letting them suck four or five months, and give them a plenty of good hay and oats, or other suitable feed in proper quantities. If they are kept well and comfortably through the first winter, the succeeding spring will give us good, thrifty yearlings, which we shall not be ashamed to have our brother farmers look at.

Mr. Lincoln does not inform us whether his calves are good, bad or indifferent; he simply tells us how he avoids a great deal of trouble. I think one object should be to give them every attention while young, and endeavor to obtain good calves, irrespective of trouble. But perhaps I am in error. Will Mr. L. favor us so much as to let us know what kind of calves he gets, by adhering to his method.

Wm. H. Jordan.

Charleston, Me., May 17, 1869.

Remarks.—In his book on "American Cattle," Mr. Allen says: "the calf should, as soon after birth as inclined, suck its dam. This is indispensable to its health, in enabling it to discharge the fœtal nutriment remaining in its stomach and bowels, and give it strength for future action. Even when it is intended to bring it up by hand, in feeding from the pail, three or four meals are all the better, and it will as readily take the finger for feeding then, as immediately after its first meal." We regret that in consequence of being mis-

laid, the publication of the above communication has been delayed longer than it should have been.

GENTLE TREATMENT OF COWS.

Mr. X. A. Willard, the great cheese factory man of New York, in a communication to the *Western Rural*, discourses of the importance of kind treatment of cows.

We wish it could be generally and thoroughly understood that nothing pays better in the dairy than kindness and gentleness to stock. Milch cows should be kept as quiet and comfortable as possible, and no person should be employed in milking that the animals fear.

Any undue nervous excitement not only lessens the quantity, but depreciates the quality of milk. Sometimes cows take a dislike to their milker and in such cases a change should be made, otherwise there is liability of the cow falling off in her milk. We have seen cases of this kind and although such freaks are quite unaccountable, it will always be found better to change the milker, if possible, rather than to attempt to conquer this peculiarity.

We do not approve the practice common with some dairymen of the milkers milking the cows indiscriminately. The hands should each select a certain number of cows and continue to milk them from day to day throughout the season. The hours of milking should be regular and each cow should be milked in regular order. The milk should be drawn rapidly and to the last drop, and all loud talking singing and wrangling avoided. These are little things in themselves and may seem to many to be "over-nice." There was a time when we thought so, but repeated and well-conducted experiments have convinced us that they are important points to be attended to, and must be observed to obtain the best results.

We always insist that the milkers study the disposition of the cows under their charge, that they become familiar or perfectly acquainted with each animal, patting them or in other ways making them understand that you are friendly and fond of them. When once their confidence has been obtained in this way, they will exhibit affection in return and will yield in the increased quantity of milk more than enough to pay for the time and trouble given to the purpose indicated. Some cows are extremely nervous and excitable; such require extra caution and attention in management, otherwise they soon become worthless for the dairy.

In driving cattle from the pasture to the stable they should never be hurried or made to go faster than a walk. Good cows at this season have well filled udders, which makes it painful to move over the ground faster than a walk. Besides in warm weather by hurrying the animal there is always danger of overheating her blood and milk, and thus not only injuring it but all the other milk with which it comes in contact. Dogs should never be allowed in a dairy. They are the source of infinite mischief.

In all our observations we have never yet met with a strictly first class dairy of cheese where the cows were dogged from the pasture to the stable. What we desire to impress upon the minds of farmers is that these truths should be understood not only in the abstract, but that they be immediately carried into practice. Neither good butter nor good cheese can be made from diseased milk, nor can good milk be had from diseased cows.

HALTER BREAK YOUNG COLTS.

Any time after a colt is two weeks old, he should be halter broke, so that when the dam is in use, either upon the road or farm, he may be kept at her side or secured in the stable. The halter may be put on with little trouble in the stable. Have the mother harnessed, and hitch the halter strap to the hame ring, not giving more than two feet play room; then lead the dam out, and the colt will be obliged to follow, and will soon give up.

Any young animal will submit to coercion, if the force appears to be the will of the parent. For this reason we do not approve of halter-breaking young colts by hauling them, or being hauled about by them.

Every person who drives his team upon the highway, the colt to follow at will, experiences more trouble by having it follow off other horses, or getting lost from the dam, than to ten times pay the expense of a halter and halter-breaking; and besides it is not safe or profitable when using the mare in hot weather, to allow the colt to suck at any time he may choose. Colts are easily injured by taking heated milk, and do not recover from the effects for a year or more—in fact, never get entirely over it, for they become reduced in flesh, get lousy, shed their hair, and barely pass through the first year of their existence, which is the most critical period of their growth and development. An inferior yearling is not usually chosen to bring up into a good horse.

There is just as much profit in having the colt under subjection while the dam is in use upon the farm, as when driven upon the road The same trouble, and perhaps more frequently, may arise from heated milk while performing heavy work; and there are, also, many chances for the animal to injure itself, if at liberty, by attempting to jump over harrows or mowing machines while they are in motion. Crops are often injured by colts unhaltered when the mother is drawing the cultivator in the corn field.

Even if the colt is usually to be kept in the barn while the dam is in the harness, it is

better to have him subjected to the use of the halter; for then he may be taken, when the case requires it, to the village, and kept where he belongs, or tied to the fence while the team is in the field at work. If a colt is to be left in the stable during the day, while the mare is put to hard work, or driven a long distance, let him fill himself before the mother is harnessed, and on her return, kept away, if the mare's blood is heated, until it has cooled off. The milk of the dam should be drawn with the fingers, once or twice during the day, in absence of the colt.—*Ohio Farmer.*

LAWNS.

A firm, velvety, elastic turf for a front yard or lawn we regard as one of the most beautiful of all the outward adornments of a home. But in consequence of the violence of our climate it is undoubtedly more difficult to keep a lawn in good order in this country than it is in England, and hence perhaps the popularity of trees and shrubbery, which sometimes make our dwellings look as though their occupants were reverting to the tastes of the aborigines. We are glad to see evidences of a change of fashion in this respect. Lawns are becoming more common, and we think many will be interested in the following statement of Prof. Eastman of Commercial College fame, who has recently fitted up extensive pleasure grounds in connection with his residence in Poughkeepsie, N. Y., especially as his plan is as applicable to a small yard as to a broad lawn. We copy from an article in the *Dutchess, N. Y. Farmer*:—

I read much on the subject, before I made my first attempt, determined that the work should be well and intelligently done. I then commenced operations by draining, trenching, subsoiling, manuring, grading, ploughing, spreading Plaster of Paris and Peruvian Guano, harrowing, picking off the stones and coarse lots of earth, and finally sowing seeds of the best mixture and quality bountifully; raked again, rolled it and waited for the result. I had followed directions to the letter, at an extravagant expense, and expected to have a perfect lawn in a very short time. I have now waited four years and find it far from what I had reasonably expected it would be the next season. I have added greatly to the expense each year by weeding, re-seeding, filling up the uneven places, &c., &c., but my disappointment at the result has been more than all.

The next season I concluded to lay down four acres more, and to try another plan. I omitted two-thirds of the labor I had expended on the first lawn, and one-half the expense in manure and fertilizers. I simply ploughed the ground deep, manured it as thoroughly as for a garden crop, graded and removed all stones and rubbish. I then purchased, for a small sum, from the farmers near the city, sod enough to cover the whole four acres. I selected this sod from low, mucky places, in ravines and between the hills from ground that had long been in grass. Selecting the sod from these uncultivated places enabled me to get just what I required, a sod of fine velvety grass, free from weeds and of unequalled richness, at a small expense. I prepared at small expense a cutter resembling a corn marker, except the teeth were of iron and thin and sharp. With this I cut the sod in strips a foot wide and eighteen inches long. Then with spades lifted them from the ground at a uniform thickness of two inches. These were at once carted to the ground already prepared, and laid down as evenly and firmly as possible and with much less expense, labor and time than would be supposed, the entire lot was covered. I then rolled it thoroughly with a heavy roller. The sod being two inches in thickness showed no signs of being transplanted, and in three weeks from the time they were laid it presented a firm and even surface. I then mowed the lawn with a scythe and a week later went over it with my lawn mower. This lawn has now been down for three years and speaks for itself. Suffice it to say it is a perfect success. It is the first to respond to Nature's call in the spring, and the last to yield to her demands in the fall.

It has never been weeded but once, and has been cut from two to three times a week during the summer season with a lawn mower, and grows more beautiful and perfect every day. It is regularly top-dressed every fall with long horse manure.

The above method has been tried by quite a number on a large and small scale and found to succeed most admirably. After a careful estimate of the expense incurred in making the two lawns, I found a large balance in favor of the latter, to say nothing of the vexations and delay caused by the first plan. The two inches of sod was equal to a two-inch dressing of manure, and the saving in this respect alone, to say nothing of seed and extra labor, was almost equal to the expense of sodding."

AGRICULTURAL ITEMS.

—Mr. Justin S. Davis, of South Reading, Vt., has lost one hundred and fifty-three sheep the past winter.

—Benjamin Wakefield, of Lyndon, Vt., lost a cow last week from the effects of eating poison set for woodchucks.

—A correspondent of the American Institute Farmer's Club says that for removing knots from plum trees, he takes a paint brush, dips it in spirits of turpentine and thoroughly saturates the knot, being careful not to touch the tree except in

the diseased parts. The turpentine kills the excresence and the trees put out healthy branches below it. He burns all branches of diseased trees removed in pruning.

—Half a dozen eggs beat up with two ounces of salt, is recommended as a sure relief of cattle choked with a potato or an apple, by a correspondent of the *Country Gentleman*.

—It is estimated that the maple sugar product of Michigan this year is one-third larger than ever before; or some 7,000,000 pounds, which at 16 cents, would amount to $1,120,000.

—The *Rural New Yorker* concludes that our cities are less prosperous than of late years, with few indications of improvement, while the country is in a comparatively progressive and enviable condition.

—The *Gardener's Monthly*, in speaking of the nasty rose slug and the rose bug, says all through the garden handpicking and watchfulness will be found the best remedy for all the larger class of insects.

—Potato speculators in some sections of the country have been badly bitten this season. A Michigan paper says that farmers in portions of the State have been obliged to sell potatoes at fifteen cents per bushel, for which they refused $1.50 last fall, and that with very large stocks on hand.

—A correspondent of the *Country Gentleman* in an article on raising wheat says, "If the farmers of this State would try one-half as hard to raise their own bread, as some of them do to raise fast horses to spoil their children with, we should soon hear the last of importing wheat from the West."

—A Southern paper says mosquitoes may be driven from a room by placing a piece of gum camphor, one-third the size of a common egg, in a tin vessel and evaporating it by holding it over a lamp, taking care it does not ignite. The smoke will fill the room and expel the mosquitoes.

—At the Newcastle, Eng., Farmers' Club, Mr. Throckly gave six good rules for beef raisers: 1. Never buy a bad bred beast. 2. Cheap bought is half sold. 3. Feed the best food. 4. Give it regularly, and clean. 5. Keep them warm and dry. 6. Sell as soon as fat.

—A correspondent of the *Germantown Telegraph* says that he knows a first-class farmer who cultivated his fence corners, or rather land which the plough would not reach along the fences, in grass, and found that the product met all the expenses, and his fields suffered very little from weeds.

—Maj. S. Dill, of Phillips, Me., writes to the *Maine Farmer*, that "Sheep still continue to 'kick the bucket,' notwithstanding they have got out to grass. Quite a lot of farmers have lost half their flocks. One farmer remarked that he had lost fifteen out of thirty-one, another replied that he could beat that, for he had lost eighteen out of twenty-eight. I believe worms in the head to be the chief cause. I saw one head opened which contained five large grubs or worms."

—To prevent inflammation and soreness in a foot wounded by a rusty nail, a correspondent of the *Germantown Telegraph* says as soon as possible after the foot is hurt put some hot ashes in half a pail of water and immerse the foot in water while as hot as can be to be comfortable, and keep it in half an hour.

—A Virginia correspondent of the *Rural New Yorker* has fed his horses a raw potato once or twice a week for the past twelve years, and they have never been troubled with the ascarides or pin worms. His grandfather, who had an extensive experience with horses, considered it a sure preventive.

—The *Toronto Globe* gives a description of a successful "Minkery" at Patterson, Can. An acre of land is enclosed by a close high fence. Buildings and fixtures are somewhat expensive, but it is claimed that with skins at four or five dollars each the establishment is profitable. They are fed on liver, hearts, lights, &c., which a butcher furnishes at a dollar a mink per year.

—The Lewiston, Me., *Journal* thus describes a new apple. "Among the productions of Franklin county which are spoken highly of is the Deane apple, known sometimes under the name of the nine ounce apple. It is described as an excellent, fine looking and eating apple, of large size, and will keep on shelves till February. The tree spreads low, and is hardy. It seems to be a great favorite among those who cultivate it. It originated, we believe, in Temple."

—A correspondent of the *Prairie Farmer* says, take up a dozen or so of your cabbage plants as soon as they are large enough, without regard to the weather, and take them to the place you wish to set. Have a dish of rain water with you. Make a hole and put in your plant, fill in the dirt and press it firmly around the roots until the hole is nearly full. Then turn in half a gill or so of water, and haul fresh dirt upon that, but do not press it. This will prevent the ground from baking, and the plant is almost sure to grow.

—Mr. N. M. Carpenter, of Ellington, N. Y., contributes to the New York Farmer's Club the following cure of flatulent colic in horses, a disease of which he thinks horsemen are sadly ignorant, and the fatal results of which he believes are frequently ascribed to bots. He says: "Take a piece of old or worthless cotton cloth, set it on fire in such a manner that it will not blaze, but will smoke well; throw a blanket over the horse's head, so as to confine the smoke about the nostrils as much as possible; continue to apply the smoke 10 or 15 minutes, which seems to act as an antispasmodic, and, so far as I know, has never failed to give relief, although the second application has been required sometimes, in very bad cases, to render the cure permanent."

EXTRACTS AND REPLIES.

APPLE TREE BORERS.

Can you tell me the best remedy for *borers* in apple trees? I find places in my trees as if they were bored with a gimlet, where I suppose the borers have gone in. It is impossible to get at them, even with wire. DEDHAM FARMER.

Dedham, Mass., June 11, 1869.

REMARKS.—Those smooth round holes in your trees, which look as if bored with a gimlet, are the places where the borer left, after having spent some two years in their trunks, excavating a tunnel without legislative aid, and preparing himself for that perfect state of a winged beetle in which he left your tree. If the *Saperda bivittata* ever laughs, he probably does so when he sees a person closing up this orifice, or fishing therein for his poor body, now clothed with feathers and wings. This beetle deposits its eggs, as described by Mr. Hersey in the FARMER of May 22, on the soft bark near the ground in June and July, from which a small worm soon hatches and eats through the bark, where it passes the first winter. Here it remains about a year, when its jaws become strong enough to cut into the solid wood. Stopping up this end of his hole, at this time, as directed by "Zen," in the FARMER of June 19, or probing with a wire, may be effective. But the best time to destroy them is before they enter the wood.

KINDNESS TO ANIMALS PROFITABLE.

I am very glad to hear so much said in the FARMER, in regard to kindness to animals. I believe many valuable heifers have been ruined by harsh treatment. My father raised a great many heifers, and my mother always took it upon her to break them. I have seen her stand in a stooping posture half an hour at a time trying to milk a kicking heifer. In one case that I particularly remember, the heifer would stand on three legs and kick at her as fast as she could make her feet fly. After getting tired of standing on three legs, she would put her foot down, but at the moment mother commenced milking she would commence kicking. All this time mother would wait patiently, still holding the teat in her hand, ready to milk as soon as the heifer put her foot down. Mother would not allow any one to speak a harsh word to the provoking animal, much less to give it a blow. As soon as the heifer became satisfied that no one wished to hurt her, she gave up, and would let any of us sit down and milk with both hands. I do think a cow will give more and better milk if she feels perfectly at ease, and can regard every one about her as a friend, than one that expects a kick or a blow from all who come near her. J. P. P.

North Weare, N. H., June 4, 1869.

REMARKS.—The grand secret of the successful training of animals can be learned, we think, from a single sentence in this article. Just think what a kicking creature the writer is speaking of. She would stand on three legs and strike with all her might till fairly tired out. Some boys would have given her a "course of sprouts" that would have resulted in a confirmed kicker. But not so with our correspondent's good mother. She would not allow even a cross word to be spoken. Then comes the sentence in which the "grand secret" we have spoken of is imbedded,—"As soon as the heifer became satisfied that no one wished to hurt her, she gave up, and would let any of us set down and milk with both hands." Boys, do you "see it?"

HAY MAKING.

From my experience in growing grass and making hay I have been led to adopt the following system. My land generally remains in grass four or five years. I spread no manure on my grass land, as I find my stock eats new meadow hay best. I plough in my manure. I sow no clover seed. I commence haying very early, and though I use a mowing machine, it is rather late by the time I get through. The mower is started after the dew is off in the morning, and runs until noon. The tedder is then put into the field, and the grass thoroughly shaken up. After which the horse is fed and rested half an hour. Then the tedder runs an hour or more, when I change for the horse rake, and put the hay into windrows. These are thrown into large heaps and covered with caps two yards square. I give my hay from two to three sunnings; stirring it diligently from three to four o'clock in the afternoon. My object being to make it as fast as I can and make it well. Then I want to put it into the barn, and I want the barn as tight as a stone jug with the stopple out. I do not approve of a cellar under the hay, or of any draft of air through it, as it ought to be so well cured before being housed that it will not be injured by the sweating process, to which all hay is subjected in the mow, though it may be so thoroughly dried that you may think there is no moisture in it.

E. G. TURNER.

New Bedford, Mass., June 5, 1869.

REMEDY FOR KICKING COW FOUND.

Last winter I made inquiries through the FARMER for a remedy for a kicking cow. Among the many replies were one from O. C. Wait, West Georgia, Vt., and another from R. Parker, Corinth, Vt. My cow being dry at the time they were published, I had no opportunity to try either remedy until she dropped her calf this spring. As Mr. Wait wished me to report progress through the FARMER for the benefit of those similarly afflicted, I will state how his remedy has worked on my cow, one of the worst kickers that I ever fell in with in all my life. I could not make the least attempt to take hold of her teats without receiving a kick, and all caused by the brutal treatment of a drunken vagabond, in the shape of a man, who had to sell her for about one-third of what she would have brought providing she had been treated kindly and gently.

After she dropped her calf this spring, I first thought that I would build one of Mr. Parker's "fiddles," as his boys called it, which I know must prevent any cow from kicking; but not having the lumber at hand, I concluded to try Mr. Wait's remedy. Having an old harness-saddle on hand, I put the cow in the stanchion, laid the saddle on her back as gentle as possible and by the help of one of my boys, worked it aft close to the forward part of her hips; then brought the strap under her belly just forward of her udder, and drew it through the buckle with a quick and firm pull. It took the kick out of her in an instant. She never has offered to lift a foot to kick when the saddle was on her back. Now she is so far subdued that all I have to do is to lay the saddle on her back, sit down and milk away without fear of being kicked over, and having the milk pail spoiled. This one simple remedy for a kicking cow is worth

many years' subscription price of the FARMER, for it has enhanced the value of my cow in my estimation thirty dollars at least.

E. LEONARD.

Long Plain, Mass., June 9, 1869.

PLANT PROTECTOR.

Mr. James R. Pierce, of Worcester, who has an acre of land planted with squashes, informs us that he has been entirely successful for two seasons in protecting his plants by throwing over them loosely a bit of common mosquito cloth, from 18 to 20 inches square, confining the corners and edges by small stones, lumps of earth, &c. This admits light and heat, perfectly. As the plants grow he occasionally loosens the cloth, and sprinkles a little plaster about the plants. As it is not necessary to keep the coverings out more than three or four weeks, he thinks the cloth will last many years. On removing them he rinses off the dirt, dries the cloth and puts them away for another year.

RINGBONE ON A COLT.

Can you or some of your subscribers inform me if there is anything that can be done to help a colt that has ringbones on all four of his feet? I have a yearling colt that gave promise last fall of being a fine one, but sometime during the winter I noticed bunches on each of his feet, and am told that they are ringbones, or clingfasts. He was quite lame with one of his hind feet in the winter, but since he has been out to grass, and has not stood on a plank floor, (which he did last winter,) he is not lame in any of his feet. Is there any difference between a clingfast and a ringbone? If you or any of your subscribers know of anything that will cure or help him, you will oblige a subscriber by communicating it through the columns of the FARMER. G. E. H.

Shrewsbury, Mass., June 9, 1869.

REMARKS.—The best horse we ever owned, we lost by ringbone. It did not occur until the horse was twelve years old, and was undoubtedly occasioned by injudicious overloading. Ringbone is a bony tumor, or a deposit of bony matter in one of the pasterns and usually near the joint. It spreads, includes the pastern bones, encircles the cartilages of the foot, and thus gets the name of *ringbone*. The disease is sometimes hereditary, but usually comes from a strain, or in colts, by curveting, turning suddenly or by violent galloping. The methods of cure are somewhat various. In Dr. Dadd's "Horse Doctor," he says:—We treat the disease, when first discovered, by cooling, evaporating lotions, cold water bandages, &c.; rest is of importance. To control inflammatory action, and by that means lessen pain and irritation within or around a joint, should be our first business; from this great benefit is sometimes derived. In chronic cases we use acetate of cantharides, applied daily, until the parts appear hot and tender; we then substitute cold water bandages, and repeat the process if necessary.

Mr. *Spooner*, in his Notes to Youatt's Structure and Diseases of the Horse, says the best treatment for ringbone is, after the inflammation has been in great measure removed by cooling applications —to rub the part well in the *iodide of mercury ointment*, washing off the effects on the following day, and thus repeating it again and again.

Mayhew, in his "Illustrated Horse Doctor," recommends the use of the following:—Iodide of lead one ounce, simple ointment eight ounces,—mix and apply with friction.

After all, if your colt does not recover on being removed from the plank floor and running in the pasture, the probability is that it will be cheaper, and afford many more chances of a cure by calling in a regular practitioner, and following his prescriptions.

STOPPED TEAT OF A COW—BUCKWHEAT STRAW.

I have a valuable heifer which has lately dropped her first calf, and I find on milking her that with hard pressure I can force but the smallest possible stream from one teat, while the others are all right. Can you or any of your correspondents inform me how I can enlarge the orifice, as I fear I shall have to make beef of her if no remedy can be found.

What shall I do with my buckwheat straw? I have seen it stated that it is not fit to use as bedding for cattle or hogs.

A FARMER AND SUBSCRIBER.

Somerset, Mass,, June 21, 1869.

REMARKS.—The orifice through which the milk passes is sometimes contracted by malformation, or by being trodden upon. Mr. W. I. Simonds of Roxbury, Vt., stated a few years ago in the FARMER that he had been successful in treating such a case by working a knitting-needle into the teat, in the first place, and then inserting the quill end of a hen's feather after cutting off most of the feather end and winding a waxed thread firmly round to prevent it from slipping in too far. By keeping this in a few days, except when milking, the difficulty was removed. But if such measures prove ineffectual, a lancet is sometimes used. We have known a suitably formed penknife used, or one part of a pair of scissors after being ground sharp on both edges. Take hold of the teat with the fingers of the left hand, holding the narrow blade with the thumb and finger of the right hand, and with a quick but gentle push cut the orifice so that a free stream of milk will flow out. Heifers often milk hard, which afterwards become easy milkers. But we can recommend the lancet only in extreme cases.

Who will answer the question about the buckwheat straw?

ELEMENTS OF GRAIN AND POTATOES.

Will you please to inform me through your valuable paper how much, or how great a proportion of carbonate of potassa is contained in or required for every one hundred pounds of wheat, oats, corn or potatoes, and oblige an old subscriber.

Rockingham, Vt., May 24, 1869. G. C. B.

REMARKS.—Prof. Samuel W. Johnson gives very full tables of the composition of agricultural plants and products in his new work entitled "How Crops Grow." Those who are curious in these matters will find this volume interesting and in-

structive. We regard it as decidedly the best work of the kind published in this country. It is sold for $2. You will there find the amount of potash in a great variety of grains, straw, manufactured products, &c.

From the table which gives the average quantity of water, sulphur, ash and ash ingredients in 1000 parts of the fresh or air-dried substance, by Prof. Wolf, you will find the amount of potash stated as follows:—

	Grain.	Straw.
Wheat	5.5	4 9
Oats	4.2	9.7
Maize	3 3	16.6
Potatoes	5 6	—

In Stephen's Farmers' Guide it is estimated that a crop of wheat of twenty-five bushels of grain and 3000 pounds of straw removes 29½ pounds of potash.

A crop of fifty bushels of oats and 3800 pounds of straw removes 75½ pounds of potash and soda.

A crop of eight tons of potatoes and 1000 pounds of tops removes 273 pounds of potash.

CHERRY POISON.

I am impelled to write a bit of experience, thinking it may benefit others. I must begin back a year in order to give the subject a fair showing, and if the facts appear conclusive, I hope other papers that circulate among farmers will copy. About a year since I called on a friend in Waitsfield who had a sick cow and was doctoring it for the horn ail, the general symptoms being considered proof of the presence of that disease. Among other things he had applied turpentine on the top of the cow's head, which was shivering or trembling badly, and evidently suffering very much. Soon after I returned home, a cow in my herd, for which I had paid a hundred dollars a little while before, was suddenly taken sick, showing the same general symptoms, namely, sudden drying up of milk, great stupor, loss of appetite, glassiness of the eyes, coldness of the horns, &c. Not knowing what to do I did not do much. I tried a little spirits of turpentine on the head. This made a bad matter worse, causing great distress and even shivering. I immediately and carefully washed it off with warm soap suds. To tempt her to feed she was turned into a fresh pasture, and in a few days she fully recovered.

Last Monday I turned my cows into a fresh pasture and left home for a few days. I returned late Thursday night to find two of my choice cows sick with nearly the same symptoms as were exhibited last year by those abovementioned. In the present case, however, the udders were swollen more or less, and what little milk could be drawn resembled what is commonly called "gargety milk;" being thick and stringy. The next day, (Friday,) I turned them into another pasture; at which time another of my cows showed some symptoms of the same disease in her udder, but had not lost her appetite. All are now improving slowly.

I have discovered in a hedge growing in my neighbor's field a large number of small black cherry trees standing so near the fence that my cows have reached over and trimmed the tops as far as they could reach. Perhaps they would not have eaten them had there been other bushes they could reach, but there were none. I have often noticed that when pastured on clear grass, where there are no bushes, cows become exceeding hungry for browse. Now I have no doubt about the cause of the difficulty, and I think the Waitsfield cow was sick from the same cause, though I am not positive that there was a chance for her to eat black cherry in the pasture in which she was kept.

Roxbury, Vt., June 20, 1869. W. I. SIMONDS.

SEEDING WITH FODDER CORN.—CLOVER SOWN IN AUGUST.

We have sowed corn broadcast upon land well manured, and have haprowed it in with grass seed, clover, herdsgrass and redtop. The corn and grass have started well together. Will the corn kill the grass?

Will clover sowed in August make roots strong enough to live through the winter? F.

Mast Yard, N. H., June 21, 1869.

REMARKS.—We fear that your young grass will have a tough battle with the corn. But your experiment will be worth more than a mere opinion.

If the snow should cover your August clover early, keep the field blanketed all winter and remain late in the spring, it might do; but we doubt whether it would live through an open winter. What say, old clover growers?

YELLOW WATER IN A HORSE.

What is the best remedy for yellow water in a horse? F. M. H.

Bennington, Vt., June, 1869.

REMARKS.—The disease called "Yellow Water" is one form of jaundice. We have never seen a case, and can only speak of it as we gather information from those who have seen and treated it. It is a disease of the liver; its excretions are interrupted, and scattered over the whole system. The water is not only discolored, but it may be seen in the eyes, mouth, and on the skin where it is not covered with hair. It must be treated as a liver disease, but it ought to be under the care of a physician.

AN ARTISTIC FARMER.

About two miles from the centre of the fine agricultural town of Barre, Mass., resides a farmer whose house is a museum of Yankee whittlings. His name is Piper, a most significant and suggestive one, surely, in this instance.

Calling there a few weeks since, the writer begged permission to see these curiosities. A crank organ playing perhaps some twelve or fifteen tunes was first set in motion. An Ethiopian band in the upper story went through the manipulations of minstrelsy, while a gay company of mimic ladies and gents tripped on the "light fantastic toe" below.

Next in order was a large glass cabinet, the shelves of which were crowded with articles of the most elaborate workmanship, such as fans, dogs, cats, snakes, &c. To make this part of the museum perfect the jack knife that whittled them should have been there. However the head was —at least on the outside—which was better still.

Another crank organ playing a number of tunes, set two Ethiopian puppet minstrels vigorously to work in a clog dance. The little fellows rattled on the spring board so noisily that a married daughter of Mr. Piper, sitting in the room, requested him to desist, lest it might awaken a child lying in a cradle near her, and another *pipe* of a less melodious cast, be added to the concert. The grandmother, also sitting near, commenced rocking the cradle, when, lo! a tune was played in harmonious numbers that again composed the child to slumber. By an ingenious adjustment this rocking organ played seven tunes, the machinery of

which lay packed away behind the occupant's head, ready to do office when called.

We were next ushered into the parlor. A child's wagon stood in the way. In removing it it commenced a tune. How many more were concealed behind we did not inquire, but should not have been surprised on sitting down in a rocking chair, to hear it emit musical sounds. Four centre tables were ranged on one side of the room of a most beautiful pattern, and the most elaborate workmanship and artistic skill, which merit a brief description. The largest has 4000 pieces of eight different kinds of wood worked into the face of it, in which is wrought Bennet's country seat, surrounded by appropriate shrubbery and trees. Next is one a trifle smaller with 2800 pieces, in which appears Barnum's country seat at Bridgport, also worked with various woods, adorned in the same manner, and imparting to it a life-like glow and beauty. The third is smaller still, with 2200 pieces, and viewed separately would be considered a highly wrought work of art. The fourth is of the size of a light-stand, having 100 pieces very unique.

Other curiosities of less attraction to be found here, are passed over, but a visit will amply repay the trouble to all who have the desire to witness what the ingenuity of man may compass. How many organs and fiddles he has constructed during the long winter evenings of the sixty-eight years he has lived on this earth, we know not; but judging from the number of articles he has made, he must have commenced very young or been very industrious. D. W. HEYWOOD.

Barre, Mass., June 23, 1869.

WHEN DO BEES SELECT THEIR HOMES?

A swarm of bees were lost soon after they were carried out in the spring. The hive containing the comb was not moved. On the 8th of June, bees were noticed about the hive,—only a few, however. The hive was not noticed again until the 13th, when there were apparently as many bees about the entrance as there were at the hives containing good working swarms. After the bees had done work for the day, the hive was examined and found to contain but a few bees,—among them some drones,—perhaps not one hundred workers and drones together. On the 14th of June, a good large swarm took possession of the hive, and have remained at work. Will some one versed in bee-ology tell us when the bees find their new homes? Is it before or after swarming?

Mast Yard, N. H., June 20, 1869. F.

DECOCTION OF OAK BARK FOR WARTS.

If "B. B." in a late number of the NEW ENGLAND FARMER, has not found a remedy to cure the warts on his heifer, please tell him to try white oak bark. Boil the strength out of the bark and then boil the liquid down very strong, almost to a syrup, and put a very little on each wart, just enough to wet it. J. P. P.

North Weare, N. H., June 4, 1869.

AGRICULTURAL ITEMS.

—The Iowa Agricultural College is five stories high, and contains over one hundred rooms; the farm 648 acres.

—A correspondent of the *Canada Farmer* who sold the milk from twenty-six cows to a cheese factory last year, commenced feeding corn on the last of July from an acre planted in drills. In September he omitted the corn for four days, and the result was a diminution of fifty-two pounds of milk a day. The corn feeding was again resumed, and in four days the cows gave their customary quantity of milk.

—The value of Canadian cattle exported into the United States during the first three months of 1869 was $236,252—nearly double the value of those exported during the same period of 1868.

—Dry wood ashes sprinkled lightly from a fine sieve upon turnips is good to keep off insects. When applied by the hand enough is often thrown upon them to injure the tender plant. Hold the sieve low and simply dust the leaves.

—An old stable keeper in England says he has never had a bad foot on his horses since he commenced the practice of bedding on a thick layer of sawdust. Pine sawdust he finds the best, oak the worst.

—The *Tribune* says, a farmer in Ohio had a thrifty orchard which blossomed freely, but bore no fruit. He washed twelve of the trees once a week with strong soap suds, and was gratified by a fair harvest the subsequent season.

—A shrewd farmer in the Vermont Legislature declined answering the speech of a member who was remarkable for nothing but frothy and pugnacious impudence and self-conceit, thus: "Mr. Speaker, I can't reply to that ere speech, for it always wrenches me terribly to kick at nothing."

—A daughter of Samuel Clark, of Starksboro, Vt., aged six years was recently poisoned by eating arsenic. The mother being absent when the child returned from school, she went into the cellar, and picked up and eat a piece of bread and butter that had been sprinkled with arsenic and left for rats.

—Mr. Joseph Harris expresses the opinion that indigestion is the source of nearly all ordinary complaints in horses, and that this is brought on by irregular feeding and watering; by exposure, fatigue, by long journeys without food, in a storm, and then by over-feeding and neglecting to rub them dry before leaving them for the night.

—During a cold storm on the night of May 28, a farmer near Ipswich, England, lost 216 out of 300 ewes that had been turned on the unsheltered marsh lands just after having been shorn. Their carcases were found the next morning in heaps where they had huddled together in the vain attempt to keep warm.

—A small tablespoonful of kerosene oil mixed with one quart of ground corn and whole buckwheat mixed with skimmed milk or water, is recommended for gapes in chickens by one correspondent of the *Country Gentleman*, while another puts a small pinch of fine tobacco in the mouth of the patient with water to wash it down. This loosens the worms which are either sneezed out or swallowed.

For the New England Farmer.

CHEESE DAIRIES IN BARRE, MASS.

Statistics of cheese manufacture—Adaptation of Soil—Attention given to Manures—Durham and other Stock—Notice of excellent Farmers—Mr. Bates' Fruit Farm—Tile-draining—Feeding Cows—Fairs and Fair-grounds of the Worcester West Agricultural Society.

As Barre may be considered the banner town in the Commonwealth as regards this branch of the dairy, it may interest your readers to know what its farmers and cheese factories are doing. The high prices that Barre cheese have commanded in the market for many years past, the superiority of its grazing lands, and its magnificent stock, justly entitle it to this precedence, and show that "blood" tells as well as grass,—more especially when it is considered—"all flesh is grass." The farmers of this region are all of a practical character, who regard "fancy farming" as of little moment, but yet who hold "book knowledge" in the highest esteem.

There are three cheese factories doing a thriving business within the town limits, viz: "The Barre Central Cheese Factory," situated in the centre of the town; "The Barre Cheese Company" (south), located in the southern part, known as Barre Plains; and the "Barre Southwest Cheese Company," a private organization placed on the farm of Joel B. Hinckley in the southwest of the town. From a recent visit to each of these factories, your correspondent has gleaned the following information from the superintendents:—

"The Barre Central," which is in charge of Mrs. Hinckley, has about 450 cows, is in receipt of 13,500 pounds of milk daily, and on the 19th inst., 1429 pounds of cheese were made. Three hands are employed here, who commence at 4, A. M. and close their labors at about the same hour, P. M.

The "South" Factory, under the superintendence of Abner R. Mott, has 275 cows, receives 8000 pounds of milk *per diem*, and turns off a relative amount of cheese.

The "Southwest," in charge of Nathan C. Haynes, which is not an incorporated company as before intimated, has about 150 cows, receives some 4300 pounds of milk daily, and produces a relative amount of cheese.

The whole may be summed up in round numbers as follows: 875 cows; 25,800 pounds of milk received daily; 2900 pounds of cheese manufactured daily, which was sold in the market this season, at first, for 25 cents, and lastly for 23 cents per pound.

It will be seen by the relative statements in regard to the milk received, that the South and Southwest factories average a mere fraction under 30 pounds to the cow, while the Barre Central averages a fraction above 28 pounds. This difference may be accounted for in this wise:—the south district has large dairies, mostly consisting of 25 cows to the herd—several exceeding that number, while its grazing lands are of a rich soil, fronting to the east, and upon which no pains has been spared to bring it up to the highest condition.

The art of making manures has been reduced to a science. In years past it has been made one of the specialties of the Agricultural Fair (Worcester West) and perhaps no one has given the subject closer analysis and more careful study than T. P. Root, a leading farmer in the southern district, whose able reports in times past were worthy of preservation in the manuals of agriculture. Near Mr. Root, are the Cooks, father and sons, who have 30 cows, but do not carry their milk to any factory. They have two cows, which, if we remember rightly, have given between 50 and 60 pounds of milk apiece for several successive days at a time.

The stock to all these farms are carefully selected, mostly of the Durham grade, with a sprinkling of Jerseys, Ayrshires and Holland Dutch—of the respective merits of which, the limits of this article will not permit a further description.

There are many highly cultured farms in this town that reflect the highest degree of credit upon their owners, which we should be glad to notice, did space allow; but we cannot forbear mentioning a few which give the highest yield of milk. The dairies of A. H. Holland, T. P. Root, Wm. R. Barrett, Isaac Smith, Luke Adams, John T. Ellsworth, and others, stand at the head. One of the most valuable fruit farms is the "Kendall Farm," now owned and occupied by Simpson E. Bates, there being over 600 trees—apple and pear — nearly all in a bearing condition. There is lacking but one thing, we conceive, to make this the most valuable farm in the town, which is tile-draining, a subject which is seriously gaining the attention of the farmers generally. The fruit trees on this place are worthy of especial note to all who visit this region, both the amateur or "fancy farmer," and the practical farmer.

The natural impression of many readers, undoubtedly, in reading this article, is that to keep up these cows to the maximum condition, esculents, such as roots and meal would be freely dealt out during the fodder months. But this is not the prevailing practice. In the spring, especially, all the hay is given them and more than they can eat at a time, and the remainder is converted into cut feed, with sufficient meal to make it palatable. The high standard of these dairies is simply owing to soil, manures, and carefully selected stock.

The Worcester West Agricultural Society have beautiful and commodious grounds, a fine track and hall, and draw at the annual Fair large contributions from the neighboring towns. Your correspondent would be pleased to speak, in a subsequent communication, of several of these same towns, who range highest in the scale of agricultural pursuits.

A brief notice of Bullard's Hay Tedder, or-

iginating from this town, and also of Dr. Allen's Stump Puller, would have been given had the limits of this article permitted.

D. W. Heywood.

Barre, Mass., June 23, 1869.

For the New England Farmer.

STRAY THOUGHTS OF A FARMER.

This being a dark and rainy morning, I am shut in-doors, and being in somewhat of a musing mood, I have concluded to put my thoughts on paper, and if worth anything to the public, use them,—if not, consign them to the waste basket.

It is painful to look on our New England hills and valleys and to see our pastures and fields covered with thin, scanty crops, where fifty years ago rich harvests were gathered, our farmers purchasing their flour and corn from the West, paying freight over a distance of a *thousand miles*, with commissions and merchants' profits, while at the same time we are continually saluted with complaints that "farming does not pay." But here there must be something wrong,—something out of shape "in the premises," as the old Justice used to say. No particle of matter has been destroyed since this globe first commenced its journey round the sun; but the particles of *manurial matter* that go to make our crops have become most sadly displaced on most of our farms. The same loving atmosphere still encloses the earth that was enjoyed by our fathers, abounding in ninety per cent. or more of plant-forming material. We have also the glorious sun of our fathers, shining with all his power, as he well knows how to in a New England summer; and we have furthermore, "the early and latter rain;" so that there seems to be no lack of material, only of the skill to compound and put together.

I am not a believer in the immediate ushering in of the agricultural millennium, for there are only a few farmers who learn anything in relation to their calling after forty; scarcely any, after fifty,—of those who have made farming a life-pursuit. Farmers in New England are now in about the same situation that those of England were one hundred years ago. Their wheat crop then averaged about ten bushels per acre. But since that period they have applied brains to their soil and the crop of wheat has risen to over thirty bushels throughout the kingdom, though the soil has become a hundred years older.

As agriculture languishes, so will all the mechanical and mercantile pursuits. In conversation the other day with a merchant, he remarked that he had no fancy for farming. I said to him, sir, if we stop farming, your business will soon come to a stand still, for you will not have anything to trade upon. He acknowledged that it would be so, as agriculture is the chief corner-stone of a nation's greatness,—the main foundation of human civilization.

We have made some progress in the last twenty years in the improvement of stock. The old scrub ox has given place to a nobler animal. The same is true of cows, sheep and swine. The skilful mechanic has given his mind to the subject, and has invented new and improved tools, by which much of the hard labor is lightened and the work more thoroughly done. But many, very many of the masses plod along in the steps of their fathers, gathering their scanty crops, and appear to have no wish to better their condition.

A remark is occasionally made like the following:—"I do not want 'Boston folks' to tell me how to manage my farm. I have managed it for forty or fifty years, and think myself more competent than they are." Many of this class of men are working a good soil, and are barely making the "two ends meet," as the saying is, and are contented, thinking they are doing well. There is much land in New England that is not fit for cultivation, and it should not be attempted. There is good land enough, and it should be cultivated to its utmost capacity. It should be made to produce on one acre what now is done on three, and the crop will be produced cheaper, thus leaving a larger profit.

The time is slowly approaching when the unskilful farmer will be crowded off the track. Men buy where they can buy the cheapest. The skilful agriculturist can afford to sell cheapest; consequently he will monopolize the market. Labor I know is high, but it must be carefully laid out, so that each day shall, if possible, pay for itself and leave a small profit to the employer. The time for haphazard farming has passed. What other pursuit, managed as farming has been, would not have resulted in a complete failure. Can the merchant afford to let a stream of water run through his sugar and flour, or can the dealer in volatile materials expose his goods to the air, allowing their value to escape, and at the close of the year expect the balance to be on the right side of the sheet? This experiment has been tried in farming until the balance sheet is now a very close thing. H.

Epping, N. H., 1869.

NEW HAMPSHIRE AGRICULTURAL COLLEGE.

From the *Mirror and Farmer's* review of the annual report of the Trustees of the New Hampshire Agricultural College, to which is appended a report to the Trustees of Prof. Dimond, we make the following extracts:—

Eleven young men were connected with the College during the course of the year. After giving some details of the results attained during the year, Prof. Dimond considers "the aim and policy of the institution." Under this

head, he refers to the Congressional Act which gave it birth. He states that there is much misapprehension in the public mind in regard to the objects and designs of the colleges for which the National Government has set apart about nine and a half millions of the public lands. He shows, by a reference to the Act, that the colleges are not designed to teach the science of Agriculture alone. He says:—

"The latter clause of the fourth section is the only one which concerns us here. It declares that the object of these national colleges is to give the *industrial classes* an education. It insists that they *shall* have a *liberal education*. They *shall* also have a *practical* education. They may, if desirable, be taught the *ancient classics*. They *may* be taught in any branch of *science*. They *shall* be taught at least something of *military tactics*. They *shall* be taught those branches of science which relate to *agriculture*. They *shall* be taught those branches of science which relate to the *mechanic* arts."

Prof Dimond then refers to the origin of industrial colleges. He says that our oldest American colleges, until recently, have offered a system of training chiefly designed for those intending to devote themselves to Law, Theology or Medicine, while an important class of men has come upon the stage who need a mental training of a different character. "The Civil Engineer, the Miner, the Agriculturist and the Manufacturer, must each have his eye trained in the rigid school of practical science. To meet this want of a more practical education, such men as Smithson, Lawrence, Cooper, Chandler and Peabody, have devoted a portion of their fortunes."

He shows that Dartmouth College has the facilities to furnish the State College all that limited amount of liberal culture which the Congressional Act declares we must have, and that by co-operation with Dartmouth, the State College can secure and maintain such laboratories and other like conveniences as are essential. He also shows that a new building, four stories high, is needed for lecture-rooms, museums, recitation rooms, &c.

He says that a geological survey of the State would be a work of great value to the Industrial College, and suggests that a hydrographic survey would also be of great benefit, not only to the State, but also to the pupils of the College. Another want of the College is an Experimental Farm, to which the student, after he has become familiar with the principles which underlie intelligent and successful practice, may be taken, during the summer months, and taught the details of farming and the business connected therewith. Upon this farm, experiments should be constantly made, and new theories tested, for the express benefit of men engaged in agriculture in every section of the State. As the mechanic arts are placed upon an equal footing with agriculture, an Experimental Machine Shop is needed, which shall be devoted to the study and development of the wonder-working forces and agencies of the mechanic arts.

In accordance with the suggestions of Prof. Dimond, and in response to a resolution adopted by the Trustees of the Agricultural College, the Trustees of Dartmouth College propose to erect a building, at a cost not exceeding $40,000, on the condition that the further sum of $15,000 should be furnished by the Trustees of the College of Agriculture and the Mechanic Arts. The Trustees of Dartmouth College agree that, if an appropriation for this purpose is made by the Legislature, they will refund it to the State in case the connection between Dartmouth College and the College of Agriculture and the Mechanic Arts, shall hereafter be dissolved.

The Trustees of the College of Agriculture and the Mechanic Arts conclude their report by asking the Legislature for an appropriation of $15,000 for the purpose of aiding in the erection of the proposed new building.

Woolen Factories.—There are now in Illinois eighty-seven wool-carding mills, and thirty-three manufactories of woolens, with a capital of $3,600,000, employing 3,450 operators, one-fourth of whom are women, and consuming annually the wool clipped from over 2,500,000 sheep.

Youths' Department.

From Our Young Folks.

LITTLE BROWN HANDS.

They drive home the cows from the pasture,
Up through the long shady lane,
Where the quail whistles loud in the wheat-fields,
That are yellow with ripening grain.
They find, in the thick waving grasses,
Where the scarlet-lipped strawberry grows;
They gather the earliest snowdrops
And the first crimson buds of the rose.

They toss the new hay in the meadow;
They gather the elder-bloom white;
They find where the dusky grapes purple
In the soft-tinted October light.
They know where the apples hang ripest,
And are sweeter than Italy's wines;
They know where the fruit hangs the thickest
On the long, thorny blackberry vines.

They gather the delicate sea-weeds,
And build tiny castles of sand;
They pick up the beautiful sea-shells,—
Fairy barks that have drifted to land.
They wave from the tall, rocking tree-tops
Where the oriole's hammock-nest swings,
And at night-time are folded in slumber
By a song that a fond mother sings.

Those who toil bravely are strongest;
The humble and poor become great;
And from these brown-handed children
Shall grow mighty rulers of State.
The pen of the author and statesman,—
The noble and wise of the land,—
The sword and chisel and palette,
Shall be held in the little brown hand.

[Copied by permission from *Appleton's Juvenile Annual.*]

THE COON HUNT.

"Father," said Harry Elton, running eagerly into Mr. Elton's study, "can't we have a coon-hunt to-night? Bob says that a coon gets every night into the corn-field, and that a good many of the cornstalks are broken down. If we don't catch him," he says, "half the hills in the field will be destroyed."

"I have no objections," said Mr. Elton; "it will be moonlight to-night, and that will be favorable for your sport. So go to Bob and make all your arrangements."

Harry Elton did not wait for further assent from his father, but, hastily thanking him, ran at full speed, to find his brother Frank and the negro-man Bob, and to acquaint them of his father's consent to their proposed expedition. Frank and Bob were both delighted at the intelligence, and all three began to make their arrangements and lay their plans for the capture of the coon.

At about nine o,clock in the evening Frank and Harry sallied forth, followed by Cæsar, the house-dog, and proceeding first to Bob's cabin, found him fast asleep on the bench before his cabin-door, with his tough old coon-dog Bull—who was scarred and torn by many a conflict with coons—stretched on the ground by his master's side. Bob and Bull were on their feet in a moment at the approach of Frank and Harry, and in another moment the party set off, Bob first providing himself with an axe.

The dogs now seemed to understand the object of the expedition, and began to manifest their delight at the sport in view, by barking, capering, and rolling over each other.

"Down, Cæsar!" cried Harry; "be quiet."

"You just be still, now," said Bob to his dog Bull; "didn't you ever go on coon-hunt before? I guess you have. I guess them ears of yours have felt a coon's teeth afore this; I reckon so, I do. That old Bull, Massa Harry, is the greatest coon-dog in these parts; he can't be beat treeing a coon, I tell you; and when he just gets hold of a coon, it aren't no use for the fellow to scratch and fight. Bull just uses him up in no time."

Bob was never tired of bragging about the courage and sagacity of his dog Bull, and in this way they amused themselves until they reached the cornfields, about a mile distant, in the vicinity of a low, swampy wood. They had scarcely reached this spot before the dogs gave evidence that they had struck the scent of a coon, and in another instant the whole party were in full chase. The coon rushed through the rail fence, the dogs at his heels, and in a few leaps had reached the cover of the wood; the dogs pursuing him hard, and Bob, and Harry, and Frank all shouting frantically at him.

There was no hope for the coon but a tree, and up he scrambled, barely escaping Bull's eager fangs, a tall and straight tulip-tree, that stood near the bank of a small, sluggish stream which coursed through the wood. The dogs, at the foot of the

tree, were barking furiously and tearing at the bark, when Bob and the two boys came up to the spot.

He's treed, sure enough," cried Bob; "but he can't get off that way nohow;" and with these words the negro went to work vigorously with his axe at cutting down the tree. It was not many minutes before the tree began to totter, and in the next instant it went crashing to the ground; falling, however, directly across the little stream already alluded to. As it fell, the dogs and the boys rushed down the bank of the stream to the water, while Bob scrambled along the trunk. They now saw the coon on a small branch that reached into the stream, which he had run down with the hope of escaping by the water, which he takes to readily.

But as the dogs are on the bank, close to the branch, he hesitates. The dogs bark furiously at him, and Harry tries to urge them into the water in pursuit, while Bob climbs along the trunk of the tree, and attempts to shake the coon off the limb, and Frank throws several sticks at him. Still the coon hesitates to take to the water, and the dogs cannot reach him on his small branch. The boys shout, the dogs bark, the negro grumbles, and shakes the branch with all his strength, and threatens the coon with every possible vengeance if he does not abandon the small limb, and afford the dogs a chance for his capture.

The coon could not hold out long in this position, and as Bob had now cut off his retreat, he at last leaps into the water and makes a dash for the opposite bank. The dogs instantly plunge in, in pursuit, and in a moment Bull is upon him. The coon slips under the dog as he dashes eagerly at him, and giving his pursuer a deep and ugly gash on the nose, which brings the blood and a howl of pain, manages to reach the opposite bank, but now with both dogs close at his heels.

Meanwhile Bob had scrambled along the trunk of the tree across the stream, and Harry and Frank were following him as rapidly as the thick branches of the tree would permit. "Catch him, Bull," shouted Bob; "at him, Bull! at him!" "Go in, Cæsar; catch him, catch him!" shouted both the boys; and all three—all five we may say, if we count the dogs—were wild with excitement for fear the coon would escape.

But the dogs are already upon the coon, just as he attempts to gain another tree, and the battle begins. The coon shows good fighting qualities, making the dogs' hair fly, and biting and scratching them badly. But he soon has to succumb, and in a few moments the dogs stand over him victors, although their bloody noses show that the battle has not been too easily won.

"Golly!" exclaimed Bob, as he held up the coon by the tail, "that's a powerful big coon, I tell you; and he was just the finest fighter this here nigger ever saw. Golly, ain't he big, Massa Harry and Massa Frank? and didn't he give old Bull a mighty bloody scratch on the nose?" And the negro, as he proceeded to relate the adventures of the hunt, gave way, every few moments, to long and boisterous roars of laughter.

The party now proceeded homeward, quite satisfied with their evening's sport. The next morning the skin of the coon adorned Bob's cabin, stretched on sticks, Frank and Harry agreeing that he should possess the coon's skin, for the purpose, in the ensuing winter, of making a coon's skin cap, ornamented, as he promised it should be, with the coon's tail hanging down behind.

WATCHING ONE'S SELF.

When I was a boy, said an old man, we had a schoolmaster who had an odd way of catching idle boys. One day he called out to us:

"Boys, I must have closer attention to your books. The first one of you that sees another boy idle, I want you to inform me, and I will attend to his case."

"Ah," thought I to myself, "there is Joe Simmons that I don't like; I'll watch him, and if I see him look off his book, I'll tell."

It was not long before I saw Joe look off his book, and immediately I informed the master.

"Indeed," said he, "and how did you know he was idle?"

"I saw him," said I.

"You did; and were your eyes on your book when you saw him?"

I was caught and never watched for idle boys again.

If we are sufficiently watchful over our own conduct, we shall have no time to find fault with the conduct of our neighbors.

A Laughable Clock.—A German in New Albany, Indiana, has what he calls a "dumpling-clock" in his window. On its top is a fat and jolly looking Teuton, who holds a fork in his hand. By an ingenious contrivance, the fork, at the end of each minute, dips into a dish of dumplings, and carries one of them to the mouth of the Teuton, who swallows it with a choking gurgle, and a queer motion of his glass eyes.

We have seen even boys and men who are little more than dumpling-clocks,—good to count breakfast, dinner, and supper time.